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Regulations and Non-Regulatory Revisions to State Implementation Plan: Oklahoma

Atlantic Environmental Associates, Inc.
Waltham, MA

Prepared for

Environmental Protection Agency
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Regulations and Non-Regulatory Revisions to State Implementation Plan: Oklahoma

By

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Contract No. 68-02-3565

EPA Project Officer: Willis P. Beal

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U.S ENVIRONMENTAL PROTECTION AGENCY
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16. ABSTRACT

This document has been produced in compliance with Section 110(h) of the Clean Air Act, as amended in 1977, which mandates periodic publication of State Implementation Plan (SIP) requirements. The first section of the document comprises the Federally approved SIP regulations. It consists of the EPA-approved State and/or local air pollution control regulations cited by reference in the Federal Register; regulations promulgated as of August 1, 1981 have been included in this document.

The present compilation constitutes an update of a previous documentation of regulations as of July 1, 1979. State and/or local air quality regulations which have not been Federally approved as of August 1, 1981, are not included. However, any omissions of regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations. A summary sheet of the regulatory revisions is provided to give a quick historical assessment of the changes.

The second part of the document contains the text of non-regulatory SIP revisions approved by EPA up to August 1, 1981, excluding notices or certifications of public hearings and technical support data. A complete tabulation of these revisions is also provided.

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PREFACE

This document has been produced in compliance with Section 110(h) of the Clean Air Act, as amended in 1977, which mandates periodic publication of State Implementation Plan (SIP) requirements. The first section of the document comprises the Federally approved SIP regulations. It consists of the EPA approved State and/or local air pollution control regulations cited by reference in the Federal Register; all regulations Federally promulgated as of August 1, 1981 have been included.

The present compilation constitutes an update of a previous documentation of regulations as of July 1, 1979.* State and/or local air quality regulations which have not been Federally approved as of August 1, 1981 are not included. However, any omissions of regulations from this document in no way affects the ability of the respective Federal, State or local agencies to enforce such regulations.

This document is not intended to provide a tool for determining the enforceability of any given regulation. Rather, it is intended to provide a comprehensive compilation of those regulations which are incorporated by reference into Title 40, Part 52, of the Code of Federal Regulations (CFR). The exclusion of a Federally approved regulation from this document does not diminish the enforceability of the regulation. Similarly, the inclusion of a given regulation in this document does not, in itself, render the regulation enforceable by either the State or EPA.

The regulations have been organized in this document according to the official State/local agency format. However, since State air quality regulations vary widely in their organization, content, and language, a standardized subject index has been added. The index listings consist of both pollutant and activity oriented categories to facilitate usage. For example, regulations which apply to copper smelters may be found under sulfur compounds (50.2), particulate matter process weight (50.1.1), or copper smelters (51.15). Federal regulations pertaining to a given State are not included herein but can be found under Title 40 Code of Federal Regulations, Part 52.

Additionally, a summary sheet of the regulatory revisions is included to provide a quick historical assessment of the changes. These summary sheets contain the date of submittal to EPA of each revision and the Federal Register publication date on which the revision was approved by EPA. A brief description of the regulation which was submitted is also included.

In accordance with the Act, the second part of the document contains non-regulatory SIP revisions approved by EPA up to August 1, 1981. All approved non-regulatory revisions listed under Identification of Plan in the CFR are included except notices or certifications of public hearings, and technical support data. Non-regulatory submittals which have only received EPA approval on selected elements are included in their entirety with an accompanying indication of the status of Federal actions on the non-approved elements. The non-regulatory revisions have been organized in this document according to the date of publication of EPA approval in the Federal Register. For historical completeness, a complete tabulation of these revisions is provided at the beginning of this second section.

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* Regulations and Non-Regulatory Revisions to State Implementation Plan: Oklahoma, EPA-450/2-80-043, prepared under Contract 68-02-3388, July 31, 1980.

SUMMARY OF
EPA-APPROVED REGULATORY REVISIONS TO STATE OF OKLAHOMA SIP
BETWEEN JULY 1, 1979 AND JULY 31, 1981

Publication of Approval	Submittal Date	Page	Document Description
02/13/80	04/02/79	45FR9741	Revisions to Regulations 14, 15, 17, 9.
11/28/80	04/11/80	45FR79051	Revisions to Regulations 17(2)(a), 14 14,313, 14,313(b), 14.313c(i), 15.50, 15.53, 15.55 and Regulation 3. - Governor.

TABLE OF CONTENTS

STATE REGULATIONS

Revised Standard Subject Index	Reg.-Section Number	Title	Page
(51.13)	1	Prohibition of Open Burning	1
(2.0)	1.0	Purpose	1
(2.0)	1.1	Scope	1
(2.0)	1.2	Effective Date	1
(1.0)	1.3	Definitions	1
(51.13)	1.4	Open Burning Prohibited	2
(51.13)	1.5	Salvage Operations Utilizing Open Burning	2
(51.13)	1.6	Municipal Solid Waste Disposal	2
(51.13)	1.7	Permissible Open Burning	2
(12.0)	2	Prohibition of Removal and/or Disabling of Motor Vehicle Pollution Control Devices	5
(2.0)	2.0	Purpose	5
(2.0)	2.1	Scope	5
(1.0)	2.2	Definitions	5
(2.0)	2.3	Prohibited Acts	6
(7.0) (9.0)	2.4	Maintenance, Repair or Testing	6
(2.0)	2.5	Use of Liquified Petroleum Gas	6
(1.0)	3	Defining Terms Used in Oklahoma, Air Pollution Control Regulations	7
(1.0)	3.0	Definitions	7
(3.0)	4	Pertaining to the Registration of Air Contaminant Sources	16
(3.0)	4.1	Registration of Potential Sources of Air Contaminants	16

Revised Standard Subject Index	Req.-Section Number	Title	Page
(14.0)	4.2	Confidentiality of Proprietary Information	16
(51.9)	5	Pertaining to the Type, Operation and Maintenance of Incinerators and Defining Acceptable Emissions Smitting Therefrom	17
(51.9)	5.0	Regulation of Incinerators	17
(51.5)	6	Pertaining to the Control of the Emission of Particulate Matter from Fuel-Burning Equipment	20
(51.5)	6.0	Emission of Particulate Matter is Prohibited	20
(51.5)	6. 1	Existing from Fuel Burning Equipment	20
(50.1)	7	Pertaining to the Control of Smoke, Visible Emissions and Particulates	22
(2.0)	7.0	General Provisions	22
(50.1.2)	7.1	Smoke and Visible Emissions	22
(50.1)	8	Pertaining to the Control of the Emission of Particulate Matter from Industrial and Other Processes and Operations	23
(2.0)	8.0	General Provisions	23
(50.1.1)	8.1	Process Emission Limitations	23
(2.0)	8.2	Exception to Emission Limits	23
(9.0)	8.3	Sampling and Testing	23
(50.1.3)	9	Control of Fugitive Dust	26
(7.0) (13.0)	11	Malfunction of Equipment, Reports Required	28
(9.0)	12	Sampling and Testing Methods	29
(13.0)	13	Monitoring of Emissions Recording and Reporting of the Same are Required	30

Revised Standard Subject Index	Reg.-Section Number	Title	Page
(3.0)	14	Air Resources Management (Permits)	31
(1.0)	14.1	Scope and Purpose	31
(2.0)	14.2	General Regulations	31
(3.0)(15.0)	14.3	Authority to Construct/Operate	31
(18.0)	14.312	Attainment Areas	32
(18.0)	14.313	Nonattainment Areas	35
(3.0)	14.32	Permit Conditions	35
(3.0)	14.33	Relocation Permits	36
(14.0)	14.34	Public Review	36
(15.0)	14.35	Cancellation of Authority to Construct or Modify	37
(3.0)	14.36	Permit Fees	37
(15.0)	14.4	Authority to Operate	38
(3.0)	14.41	Permit Conditions	38
(50.4)	15	Control of Emission of Organic Materials	39
(2.0)	15.1	Purpose	39
(1.0)	15.12	Definitions	39
(50.4)	15.2	Control of Volatile Organic Compounds	40
(50.4)	15.21	Storage of VOC	40
(50.4)	15.22	Loading of VOC	42
(51.21)	15.23	Effluent Water Separators	43
(51.21)	15.24	Pumps and Compressors	44
(51.21)	15.25	Waste Gas Disposal	45
(51.5)	15.26	Fuel-Burning and Refuse-Burning Equipment	45

Revised Standard Subject Index	Reg.-Section Number	Title	Page
(2.0)	15.27	Exemptions	45
(51.22)	15.3	Coating of Parts and Products	46
(10.0)	15.32	New Sources	48
(50.4)	15.34	Clean-Up with Organic Solvents	48
(5.122)	15.35	Alternate Standard	48
(6.0)	15.4	Compliance Schedules	48
(1.0)	15.5	Nonattainment Areas	49
(51.23)	15.51	Cutback Asphalt (Paving)	49
(50.4)	15.52	Vapor Recovery Systems	49
(51.21)	15.524	Transport/Delivery	51
(15.15)	15.53	Refinery Effluent Water Separators	52
(15.15)	15.54	Refinery Process Unit Turnaround	52
(15.15)	15.55	Refinery Vacuum Producing System	53
(51.24)	15.56	Metal-Cleaning	53
(50.2)	16	Control of Emission of Sulfur Compounds	58
(2.0)	16.1	Purpose	58
(50.2)	16.2	Exisiting Equipment- Sulfur Oxides Standards	58
(50.2)	16.3	New Equipment - Sulfur Oxides Standards	59
(51.18)	16.31	Sulfuric Acid Plants	59
(51.6)	16.32	Fuel-Burning Equipment	60
(51.19)	16.33	Sulfur Recovery Plants	62
(51.11)	16.34	Nonferrous Smelters	63
(51.14)	16.35	Paper Pulp Mill	64
(50.2)	16.5	New Equipment - Hydrogen Sulfide Standards	64

Revised Standard Subject Index	Reg.-Section Number	Title	Page
(50.5)	17	Control of Emission of Carbon Monoxide	66
(2.0)	17.1	Purpose	66
(50.5)	17.2	Emission Limits	66
(9.0)	17.3	Performance Testing	66
(50.3)	18	Control of Emission of Nitrogen Oxides	67
(2.0)	18.1	Purpose	67
(50.3)	18.2	Emission Limits	67
(9.0)	18.3	Performance Testing	67
(2.0)	28-25	Citation	69
(1.0)	28-26	Definitions	69
(2.0)	28-27	Notice of Changes	72
(15.0)	28-28	Enforcement	72
(2.0)	28-29	Abatement Procedure	72
(8.0)	28-30	Emergency	72
(9.0)	28-31	Tests, Data Sampling	72
(5.0)	28-32	Variances	72
(16.0)	28-33	Air Quality Control Variance Board	73
(3.0) (5.0)	28-34	Application for Variance	74
(16.0)	28-35	Public Hearings	74
(14.0)	28-36	Proprietary Information	74
(2.0)	28-37	Notice	75
(2.0)	28-38	Fees	75
(50.7)	28-39	Nuisance Declared	75
(2.0)	28-40	Liability	75
(2.0)	28-41	Air Pollution Prohibited	75

Revised Standard Subject Index	Reg.-Section Number	Title	Page
(50.1.2)	28-42	Emission of Dense Smoke Prohibited	75
(51.9)	28-43	Incinerators	75
(51.5)	28-44	Fuel Burning Equipment	76
(50.1.1)	28-45	Process Equipment or Operations	77
(51.8)	28-46	Hot Mix Asphalt Plants	77
(51.13)	23-47	Open Burning Prohibited	77
(12.0)	28-48	Motor Vehicle Pollution Control Devices	78
(51.5)	28-49	Tables and Charts	79

TULSA CHARTER AND REVISED ORDINANCES

Revised Standard Subject Index	Reg.-Section Number	Title	Page
(1.0)	137	Definitions	86
(2.0)	138	Technical Advisory Council	86
(2.0)	139	Zoning and Planning	86
(3.0)	140	Building Permits	86
(50.7)	141	Nuisance	87
(2.0)	142	Listing of Devices and Equipment	87
(9.0)	143	Inspection	87
(2.0)	144	Rules and Regulations	87
(51.13)	145	Control of Open Burning	87
(51.9)	146	Incinerators	90
(50.1)	147	Control of Air Pollution from Smoke and Particulate Matter	92
(50.2)	148	Control of Air Pollution from Sulfur Compounds	98
(2.0)	149	Right or Review and Exceptions Thereto	102
(5.0)	150	Variances	103
(15.0)	151	Penalties	103
(2.0)	152	Limitations	103

REVISED STANDARD SUBJECT INDEX

1.0 DEFINITIONS
2.0 GENERAL PROVISIONS AND ADMINISTRATIVE PROCEDURES
3.0 REGISTRATION CERTIFICATES, OPERATING PERMITS AND APPLICATIONS
4.0 AIR QUALITY STANDARDS (PRIMARY AND SECONDARY)
    4.1 PARTICULATES
    4.2 SULFUR DIOXIDE
    4.3 NITRIC OXIDES
    4.4 HYDROCARBONS
    4.5 CARBON MONOXIDE
    4.6 OXIDANTS
    4.7 OTHERS
5.0 VARIANCES
6.0 COMPLIANCE SCHEDULES
7.0 EQUIPMENT MALFUNCTION AND MAINTENANCE
8.0 EMERGENCY EPISODES
9.0 AIR QUALITY SURVEILLANCE AND SOURCE TESTING
10.0 NEW SOURCE PERFORMANCE STANDARDS
11.0 NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS
12.0 MOTOR VEHICLE EMISSIONS AND CONTROLS
13.0 RECORD KEEPING AND REPORTING
14.0 PUBLIC AVAILABILITY OF DATA
15.0 LEGAL AUTHORITY AND ENFORCEMENT
16.0 HEARINGS, COMPLAINTS, AND INVESTIGATIONS
17.0 PREVENTION OF SIGNIFICANT DETERIORATION
18.0 AIR QUALITY MAINTENANCE AREA
19.0 EMISSION OFFSET POLICY
20.0 MAJOR STATIONARY SOURCES
21.0 - 49.0
    RESERVED FOR FUTURE EXPANSION OF COMMON INDEX
50.0 POLLUTANT - SPECIFIC REGULATIONS
    50.1 PARTICULATES

        - 50.1.1 PROCESS WEIGHT
        - 50.1.2 VISIBLE EMISSIONS
        - 50.1.3 GENERAL
    - 50.2 SULFUR COMPOUNDS
    - 50.3 NITRIC OXIDES
    - 50.4 VOLATILE ORGANIC COMPOUNDS
    - 50.5 CARBON MONOXIDE
    - 50.6 ODOROUS POLLUTANTS
    - 50.7 OTHERS (Pb, Hg, etc.)
- 51.0 SOURCE CATEGORY SPECIFIC REGULATIONS
    - 51.1 AGRICULTURAL PROCESSES (includes Grain Handling, Orchard Heaters, Rice and Soybean Facilities, Related Topics)
    - 51.2 COAL OPERATIONS (includes Cleaning, Preparation, Coal Refuse Disposal Areas, Coke Ovens, Charcoal Kilns, Related Topics)
    - 51.3 CONSTRUCTION (includes Cement Plants, Materials Handling, Topics Related to Construction Industry)
    - 51.4 FERROUS FOUNDRIES (includes Blast Furnaces, Related Topics)
    - 51.5 FUEL BURNING EQUIPMENT (coal, natural gas, oil) - Particulates (includes Fuel Content and Other Related Topics)
    - 51.6 FUEL BURNING EQUIPMENT (coal, natural gas, oil) - SO_2 (includes Fuel Content and Other Related Topics)
    - 51.7 FUEL BURNING EQUIPMENT (oil, natural gas, coal) - NO_2 (includes Fuel Content and Other Related Topics)
    - 51.8 HOT MIX ASPHALT PLANTS
    - 51.9 INCINERATION
    - 51.10 NITRIC ACID PLANTS
    - 51.11 NON-FERROUS SMELTERS (Zn, Cu, etc.) - Sulfur Dioxide
    - 51.12 NUCLEAR ENERGY FACILITIES (includes Related Topic)
    - 51.13 OPEN BURNING (includes Forest Management, Forest Fire, Fire Fighting Practice, Agricultural Burning and Related Topics)
    - 51.14 PAPER PULP; WOOD PULP AND KRAFT MILLS (includes Related Topics)
    - 51.15 PETROLEUM REFINERIES
    - 51.16 PETROLEUM STORAGE (includes Loading, Unloading, Handling and Related Topics)
    - 51.17 SECONDARY METAL OPERATIONS (includes Aluminum, Steel and Related Topics)
    - 51.18 SULFURIC ACID PLANTS

51.19 SULFURIC RECOVERY OPERATIONS
51.20 WOOD WASTE BURNERS
51.21 MISCELLANEOUS TOPICS
51.22 COATING OPERATIONS (Can, Coil, Paper, Fabric, Vinyl, Metal, Wire, Surface Coating)
51.23 CUTBACK ASPHALT
51.24 SOLVENT METAL CLEANING

Regulation No. 1

Prohibition of Open Burning

1.0 Purpose

This regulation is for the purpose of preventing, abating, and controlling air pollution resulting from air contaminants released in the open burning of refuse and other combustible materials.

1.1 Scope

This regulation shall apply to all operations involving open burning except those specifically exempted by Section 1.7.

1.2 Effective Date

The effective date of this regulation shall be January 1, 1971.

1.3 Definitions

As used in this regulation, the words and phrases shall have the definitions set forth below in this section. The definitions contained in the Oklahoma Clean Air Act, under which this regulation is promulgated, shall also apply.

Open burning shall mean the burning of combustible materials in such a manner that the products of combustion are emitted directly to the outside atmosphere.

Combustible materials shall mean any substance which will readily burn and shall include those substances which, although generally considered incombustible, are or may be included in the mass of the material burned or to be burned.

Refuse shall mean garbage, rubbish, and all other wastes generated by a trade, business, industry, building operation, or household.

Products of combustion shall mean all particulate and gaseous air contaminants emitted as a result of the burning of refuse and combustible materials.

Open-pit incinerator shall mean a device consisting of a pit (into which the material to be combusted is placed) and nozzles, pipes, and other appurtenances designed and arranged in a manner to deliver additional air and/or auxiliary fuel to, or near, the zone of combustion so that theoretically complete combustion is accomplished or approached.

1.4 Open Burning Prohibited

No person shall cause, suffer, allow, or permit open burning or refuse and other combustible material except as may be allowed in compliance with Section 1.7.

1.5 Salvage Operations Utilizing Open Burning

No person shall cause, suffer, allow, or permit open burning of combustible material in connection with the salvage of motore vehicles, tires, oil and similar substances, containers, coated or painted wire and metals, and other material.

1.6 Municipal Solid Waste Disposal

Open burning shall not be utilized in any manner in the operation of dumps and other solid waste disposal areas owned and operated by cities or towns of greater than 10,000 population, according to the latest federal census. Such disposal areas owned and/or operated by other persons under license, permit, or contract to a city or town of greater than 10,000 population shall be deemed to fall within the provisions of this section. Dumps and other solid waste disposal areas operated for the convenience of a populated area of greater than 10,000 or for the convenience of part or all of a city or town of greater than 10,000 shall be deemed to fall within the provisions of this section.

Any city or town adjacent thereto with a common boundary with a city or town of greater than 10,000 population shall be deemed to fall within the provisions of this section as of July 1, 1971. The following time schedule shall likewise apply to cities and towns of lesser population and those adjacent thereto with a common boundary.

5,000 to 10,000 population	July 1, 1972
3,000 to 5,000 population	July 1, 1973
All other cities or towns	July 1, 1974

1.7 Permissible Open Burning

The open burning of refuse and other combustible material may be conducted as specified in the sub-sections set forth below if no public nuisance is or will be created and if the burning is conducted in compliance with, other applicable laws and the ordinances, regulations and orders of governmental entities having jurisdiction, including air pollution control ordinances, regulations and orders. The authority to conduct open burning under the provisions of this section does not except or excuse a person from the consequences, damages, or injuries which may result from such conduct nor does it excuse or exempt any person from complying with all applicable laws, ordinances, regulations, and orders of the governmental entities having jurisdiction, even though the open burning is conducted in compliance with this section.

1.701 First purposely set for the instruction and training of public and industrial fire-fighting personnel when authorized by the appropriate governmental entity.

1.702 Fires set for the elimination of a fire hazard which cannot be abated by any other means when authorized by the appropiate governmental entity.

1.703 Fires set for the removal of dangerous or hazardous material where there is no other practical or lawful method of disposal.

1.704 Camp fires and other fires used solely for recreational purposes, for ceremonial occasions, or for outdoor non-commercial preparation of food.

1.705 Fires purposely set to forest or range lands for a specific reason in the management of forests or game in accordance with practices recommended by the Oklahoma Department of Wildlife Conservation, the Oklahoma State Department of Agriculture, and the United States Forest Service.

1.706 The burning of trees, brush, grass, and other vegetable matter in the clearing of land, right-of-way maintenance operations, and agricultural crop burning if the following conditions are met:

a. Prevailing winds at the time of the burning must be away from any city or town, the ambient air of which may be affected by air contaminants from the burning;

b. The location of the burning must not be adjacent to an occupied residence other than those located on the property on which the burning is conducted;

c. Care must be used to minimize the amount of dirt on the material being burned;

d. Oils, rubber, and other similar materials which produce unreasonable amounts of air contaminants may not be burned;

e. The initial burning may begin only between three hours after sunrise and three hours before sunset and additional fuel may not be intentionally added to the fire at times outside the limits stated above, and

f. The burning must be controlled so that a traffic hazard is not created as a result of the air contaminants being emitted.

1.707 Where no municipal collection and disposal service is available, the burning of refuse and other combustible materials generated in the operation of a domestic household if the following conditions are met:

a. The material to be burned must be the combined waste from a building designed to accommodate more than three such households;

b. The burning must be conducted on the property on which the waste is generated; and

c. The initial burning may begin only between three hours after sunrise and three hours before sunset and additional fuel may not be intentionally added to the fire at times outside the limits stated above.

1.708 Except as may be prohibited by other provisions of this regulation, open burning may be utilized in the operation of dumps and other solid waste disposal areas owned and operated by, or otherwise serving, cities and towns of 10,000 population or less (according to the latest official federal census), unincorporated cities and towns, and rural areas if the following conditions are met:

a. The burning must not be conducted within a city or town (other than the city or town which is the source of the refuse) or in such proximity thereto that the ambient air of such city or town may be affected by the air contaminants being emitted;

b. The burning must not be conducted within one mile of the boundary of the State of Oklahoma;

c. The burning must not be conducted within 1,000 feet of any highway designated on the official state highway map prepared by the Oklahoma State Department of Highways, and, in any event, the burning must be controlled so that a traffic hazard is not created on any public road, street, or highway as a result of the air contaminants being emitted; and

d. The burning must be conducted within one mile of any military, commercial, county, municipal, or private airport or landing strip.

1.709 The burning of hydrocarbons which are spilled or lost as a result of pipeline breaks or other accidents involving the transportation of such materials or which are generated as wastes as the result of oil exploration, development, refining, or processing operations if the following conditions are met:

a. The material cannot be practicably recovered or otherwise lawfully disposed of in some other manner;

b. The burning must not be conducted within a city or town or in such proximity thereto that the ambient air of such city or town may be affected by the air contaminants being emitted;

c. The initial burning may begin only between three hours after sunrise and three hours before sunset and additional fuel may not be intentionally added to the fire at times outside the limits stated above; and

d. The burning must be controlled so that a traffic hazard is not created as the result of the air contaminants being emitted.

1.710 The burning of any combustible material in an open-pit incinerator which has been properly designed and which is properly operated for the control of smoke and particulate matter.

1.711 The burning of hydrocarbons, which must be wasted, through the use of smokeless atmospheric flares.

Regulation No. 2

Prohibition of Removal and/or Disabling of Motor Vehicle Pollution Control Devices

2.0 Purpose

This regulation is for the purpose of preventing, abating, and controlling air pollutants which would otherwise be emitted through the operation of motor vehicles and of motor vehicle engines.

2.1 Scope

This regulation shall apply to all motor vehicles, registered or subject to registration with the Oklahoma State Tax Commission, in which, as new vehicles, motor vehicle pollution control devices have been installed by virtue of federal laws and regulations, in effect now and hereafter, requiring such devices to be installed. However, nothing in this regulation shall supersede or otherwise modify such federal laws and regulations, nor shall anything in this regulation be construed to require the installation of motor vehicle pollution control devices on motor vehicles not referred to by such federal laws and regulations.

2.2 Definitions

As used in this regulation, the words and phrases shall have the definitions set forth below in this section. The definitions contained in the Oklahoma Clean Air Act, under which this regulation is promulgated, shall also apply.

Motor vehicle shall mean a self-propelled, wheeled vehicle designed for normal use of public streets and highways.

Motor vehicle pollution control device shall mean any or all of the devices or systems referred to in this section and designed to control or prevent air pollution emissions from motor vehicles.

Positive crankcase ventilator shall mean a system, device, or designed and installed in such a manner as to prevent or reduce the release or emission to the outside atmosphere of gases and/or vapors produced or otherwise present in the crankcase of the engine of a motor vehicle.

Exhaust emission control system shall mean a system, device, or engine modification designed and installed in such a manner as to reduce or prevent the emission to the atmosphere of air pollutant gases, vapors, and particulate matter released from the motor vehicle engine through the exhaust manifold and tailpipe.

Evaporating loss control system shall mean a system or device designed and installed in such a manner as to reduce or prevent the emission to the atmosphere of the vapors of the hydrocarbon fuel contained in the fuel tank, carburetor, and/or fuel pump of the motor vehicle.

New vehicle shall mean a motor vehicle which is in the possession of persons in the channels of commerce in such a manner that the vehicle is not subject to registration with the Oklahoma State Tax Commission by the ultimate purchaser.

2.3 Prohibited Acts

No person shall cause, suffer, allow, or permit the removal, disconnection, and/or disabling of a positive crankcase ventilator, exhaust emission control system, or evaporative loss control system which has been installed on a motor vehicle; nor shall any person defeat the design purpose of any such motor vehicle pollution control device by installing therein or thereto any part or component which is not an authentic replacement part or component of the device.

2.4 Maintenance, Repair, or Testing

For the purpose of routine maintenance, repairs, or testing of the motor vehicle, its components, or the motor vehicle pollution control devices, the motor vehicle or its engine may not be operated on public streets or highways with the motor vehicle pollution control devices removed or otherwise rendered inoperable.

2.5 Use of Liquefied Petroleum Gas

Operation of a motor vehicle or its engine which uses liquefied petroleum gas as fuel is hereby exempted from provisions of this regulation.

Regulation No. 3

(As Amended)

Defining Terms Used in Oklahoma Air Pollution Control Regulations

3.0 Definitions

3.01 It is the purpose of this regulation to provide definitions of words and phrases used in the field of air pollution and which are consistent with accepted usage. The definition contained in the Oklahoma Clean Air Act, under which this regulation is promulgated, shall also apply as well as those included in Regulations Nos. 1 and 2.

Air Contaminant Source - any and all sources of emission of air contaminants, whether privately or publicly owned or operated, or person contributing to emission of air contaminants. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops and stores, and heating and power plants or stations, buildings and other structures of all types.

Air Pollution Abatement Operation - any operation which has its essential purpose a significant reduction in (a) the emission of air contaminants, or (b) the effect of such emission.

Air Pollution Episode - high levels of air pollution existing for an extended period (24 hours or more) of time which may cause acute harmful health effects during periods of atmospheric stagnation, without vertical or horizontal ventilation. This occurs when there is a high pressure air mass over an area, a low wind speed and there is a temperature inversion. Other factors such as humidity may also affect the episode conditions.

Ambient Air Quality Standards - see Table I.

Architectural Coating - a coating used for residential, commercial and/or industrial buildings and their appurtenances.

Atmosphere - the air that envelops or surrounds the earth.

Basic Oxygen Furnace - (BOF) - a furnace in which the melting and refining of iron are accomplished by the addition at high velocities of large amounts of high purity oxygen to the atmosphere above the surface of the metal bath. The metal is held in a tiltable vessel with a basic refractory lining. Such a furnace includes the furnace proper, oxygen lance, scrap and flux charging units, iron transfer units, gas collecting and cleaning equipment, stacks and any other auxiliaries pertinent to the process.

Blast Furnace - furnace and equipment used in connection with the smelting process of reducing metallic ores to molten metal in which primarily oxygen is removed from the ore and gas is produced as a by-product. The furnace and equipment consists of, but is not limited to, the furnace proper, charging equipment, stoves, bleeders, gas dust-cleaning devices, afterburner, and other auxiliaries pertinent to the process.

Catalytic Cracking Unit - a unit composed of a reactor, regenerator and fractionating towers which is used to convert certain petroleum fractions into more valuable products by passing the material through or commingled with a bed of catalyst in the reactor. Coke deposits produced on the catalyst during cracking are removed by burning off in the regenerator.

Chimney - any conduit, duct, stack, vent, flue, or opening of any kind whatsoever arranged to conduct any emission of products to the atmosphere.

Construction - fabrication, erection, or installation of a source. (Effective June 22, 1974)

Division - is the Air Quality Service, Oklahoma State Department of Health. (O.S. 63, Section 2002 June 12, 1975)

Dust - solid particulate matter released onto or carried in the air by natural forces, by any fuel-burning, combustion, process equipment or device, construction work, mechanical or industrial processes.

Effluent Water Separator - any tank, box, sump, or other container in which any material compound floating on or entrained or contained in water entering such tank, box, sump or other container is physically separated and removed from such water prior to outfall, draining, or recovery of such water.

Equivalent Opacity - the degree to which an emission, other than gray or black smoke, is partially or wholly impervious to rays of light and causes obstruction of an observer's view, expressed as an equivalent of the obstruction caused by a gray or black smoke emission of a given density as measured by a Ringelmann Smoke Chart.

Excess Air - air entering a combustion chamber in excess of the amount theoretically required to complete combustion of materials in the combustion chamber.

Existing Source - an air contaminant source which is in being on the effective date of these regulations.

Fly Ash - particulate matter capable of being gasborne or airborne consisting essentially of fused ash and/or burned or unburned material.

Foundry Cupola - a shaft-type furnace used for the melting of metals usually consisting of, but not limited to, the furnace proper, tuyeres, fans or blowers, tapping spout, charging equipment, gas-cleaning devices and other auxiliaries. Shaft furnaces used for processing non-metallic materials are not included under this definition but are included in the definition of process equipment.

Fuel-Burning Equipment - any one or more of boilers, furnaces, gas turbines or other combustion devices and all appurtenances thereto used to convert fuel or waste to usable heat or power. (Effective July 1, 1977)

Fugitive Dust - solid airborne particulate matter emitted from any source other than a stack or chimney.

Fume - minute solid particles generated by the condensation of vapors to solid matter after volatilization from the molten state, or generated by sublimation, distillation, calcination, or chemical reaction when these processes create airborne particles.

Garbage - all putrescible animal and vegetable matter resulting from the handling, preparation, cooking and consumption of food.

In Being - as used in the definitions of New Installation and Existing Source means that an owner or operator has undertaken a continuous program of construction or modification or the owner or operator has entered into a binding agreement or contractual obligation to undertake and complete within a reasonable time a continuous program of construction or modification prior to the compliance date for installation of the application regulation. (Effective June 22, 1974)

Incinerator - a combustion device specifically designed for the destruction, by high temperature burning, of solid, semi-solid, liquid, or gaseous combustible wastes and from which the solid residues contain little or no combustible material.

Major Source - (Major Emitting Facility) - means any stationary facility or source of an air pollutant which directly emits or has the capability at maximum design capacity and, if appropriately permitted, authority to emit 100 tons per year or more of a given pollutant.

Mechanical Fuel-Burning Equipment - fuel-burning equipment incorporating means by which fuel is mechanically introduced into the combustion chamber.

Mist - a suspension of any finely divided liquid in any gas or atmosphere excepting uncombined water.

Modification - any physical change in, or change in the method of operation of, a source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted, except that:

(a) Routine maintenance, repair and replacement shall not be considered physical changes, and

(b) The following shall not be considered a change in the method of operation:

  (i) Any increase in the production rate, if such increase does not exceed the operating design capacity of the source;

  (ii) An increase in hours of operation;

  (iii) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to such source the affected facility is designed to accommodate such alternative use. (Effective June 22, 1974)

Motor Vehicle - shall mean a self-propelled, wheeled vehicle designed for normal use on public streets and highways.

Multiple-Chamber Incinerator - any article, machine, equipment, or contrivance or part of a structure, used to dispose of refuse or garbage by burning, consisting of three or more refractory-lined chambers in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design necessary for maximum combustion of material to be burned.

New Installation (Source or Equipment) - an air contaminant source which is not in being on the effective date of these regulations and any existing source which is altered, replaced, or rebuilt after the effective date of the regulations such that the amount of air contaminant emissions is increased.

New Portable Source - a portable source that has never operated within the State of Oklahoma. This includes sources that are initially constructed and existing facilities that are relocating into Oklahoma from another State. (Effective July 1, 1977)

Nitric Acid Plant - process involving the high temperature oxidation of ammonia with air over a catalyst to form nitric oxide which is reacted with air to form nitrogen dioxide which is absorbed in water to weak nitric acid which may be concentrated. The plant consists of, but is not limited to, the reactor, absorber, concentrator and other auxiliaries pertinent to the process.

Odorant (Odor) - that property of a material that affects the sense of smell.

Opacity - see Equivalent Opacity

Organic Materials - chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

Organic Solvents - organic materials including diluents and thinners which are liquids at standard conditions and which are used as dissolvers, viscosity reducers or cleaning agents, except that such materials which exhibit a boiling point higher than 220°F at 0.5 millimeter of mercury absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 220°F. (Effective June 22, 1974)

Owner or Operator - any person who owns, leases, operates, controls or supervises a source. (Effective June 22, 1974)

Paper Mill - plant in which paper, paperboard, cardboard, paper felt, or similar material is produced from waste paper products, wood chips and/or pulp slurry, including, but not limited to, mixers, forming screens, suction boxes, dryers, filters, paper rolls and other auxiliary equipment pertinent to the process.

Particle Board - mat-formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

Particulate Matter - any material that exists in a finely divided form as a liquid or a solid.

Petroleum and Natural Gas Processes - processes used in the processing of crude petroleum and/or natural gas into refined products including, but not limited to, distillation columns, treating columns, catalytic cracking units, catalytic reforming units, sulfur removal equipment, petroleum coke units, flares, heat exchangers, reboilers, jet ejectors, compressors, recompressors and other auxiliary equipment pertinent to the process.

Photochemically Reactive Solvent - any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:

a. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cyclo-olefinic type of unsaturation: 5 percent;

b. A combination of aromatic compounds with either eight (8) or more carbon atoms to the molecule except ethylbenzene: 8 percent;

c. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds, it shall be considered as a member of the most reactive chemical group; that is, that group having the least allowable percent of the total volume of solvents.

Plywood - a panel built generally of a number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at an angle to the one adjacent to it.

Portable Source - a source with design and intended use to allow disassembly or relocation. (Effective July 1, 1977)

Process Equipment - any equipment, device or contrivance for changing any materials or for storage or handling of any materials, the use or existence of which may cause any discharge of air contaminants into the open air, but not including that equipment specifically defined as Fuel-Burning Equipment, or Refuse-Burning Equipment.

Process Weight - the weight of all materials introduced in a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for the purposes of combustion. Process weight rate means a rate established as follows:

a. For continuous or long-run, steady-state, operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

b. For cyclical or batch source operations, the total process weight for a period which covers a complete or an integral number of cycles, divided by the hours of actual process operation during such period.

c. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, that interpretation which results in the minimum value for allowable emission shall apply.

Pulp Mill - the process equipment used in production of pulp from wood chips or bolts which may include but are not limited to, debarker, chipper, digester, blow tank, washers, condensors, evaporators, recovery furnace, lime kiln, smelt-dissolving tank, mixers, heat exchangers, gas scrubbers and other auxiliaries pertinent to the process.

Refuse - the inclusive term for solid, liquid or gaseous waste products which are composed wholly or partly of such materials as garbage, sweepings, cleanings, trash, rubbish, litter, industrial, commercial and domestic solid, liquid or gaseous waste; trees or shrubs; tree or shrub trimmings; grass clippings; brick, plaster, lumber or other waste resulting from the demolition, alteration or construction of buildings or structures; accumulated waste material, cans, containers, tires, junk or other such substances.

Refuse-Burning Equipment - any equipment, device, or contrivance, and all appurtenances thereto, used for the destruction of combustible refuse or other combustible wastes by burning.

Ringelmann Chart - the chart published and described in the U.S. Bureau of Mines Information Circular 8333.

Smoke - small gasborne or airborne particles resulting from combustion operations and consisting of carbon, ash, and other matter any or all of which is present in sufficient quantity to be observable.

Soiling Index - a measure of the soiling properties of suspended particulates determined by drawing a known volume of air through a known area of filter paper tape and measuring the optical density of the filtered deposit as given in the American Society for Testing Materials Standard D 1704-61, expressed in coefficient of haze (COH's) per 1000 linear feet.

Source Gas Volume - the volume in standard cubic feet, of all gases leaving a source operation; for purposes of this definition, the boundary of a source operation is that point or surface at which the separation of the air contaminants from the process materials, or the conversion of the process materials, or the conversion of the process materials into air contaminants, is essentially complete.

Source Operation - is the last operation preceding the emission of an air contaminant, which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion of fuel; and (b) is not an air pollution abatement operation.

Stack - is any chimney, flue, duct, conduit, exhaust, vent or opening of any kind whatsoever capable of, or used for, the emission of air contaminants.

Standard Conditions - a gas temperature of 68 degrees Fahrenheit (20° Centigrade) and a gas pressure of 14.7 pounds per square inch absolute.

Standard Cubic Foot of Gas - that amount of gas which would occupy a cube having dimensions of one foot on each side, if the gas were at standard conditions; calculations to determine the number of standard cubic feet corresponding to actual measured conditions shall follow accepted engineering practice.

Standard Dry Cubic Foot of Gas - that amount of the gas which would occupy a cube having dimensions of one foot on each side, if the gas were free of water vapor and at standard condition; calculations to determine the number of standard dry cubic feet corresponding to actual measured conditions shall follow accepted engineering practice.

Stationary Engine - an internal combustion engine not providing motive power to a motor vehicle. Stationary external combustion engines are included in the definition for fuel-burning equipment.

Stationary Source - any building, structure, facility, or installation either fixed or portable, whose design and intended use is at a fixed location and emits or may emit an air pollutant. (Effective July 1, 1977)

Submerged Fill Pipe - means any fill pipe or discharge nozzle which meets any one of the following conditions:

a. The bottom of the discharge pipe or nozzle is below the surface of liquid in the receiving vessel for at least 95 percent of the volume filled.

b. The bottom of the discharge pipe or nozzle is less than 6 inches from the bottom of the receiving vessel.

c. The bottom of the discharge pipe or nozzle is less than 2 pipe or nozzle diameters from the bottom of the receiving vessel.

d. Other conditions acceptable to the Commissioner.

Temperature Inversion - a phenomenon in which the temperature in a layer of air increases with height and the cool heavy air below is trapped by the warmer air above and cannot rise.

Veneer - a thin panel of wood usually not exceeding 1/4 inch in thickness, formed by slicing or peeling from a log.

Visible Emission - is any air contaminant, vapor or gas stream which contains or may contain an air contaminant which is passed into the atmosphere and which is perceptible to the human eye.

Volatile Organic Compound - any compound containing carbon and hydrogen or containing carbon and hydrogen in combination with any other element which has a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage condition.

Table I

National Ambient Air Quality Standards
as Adopted by the Oklahoma Air Quality Council
March 11, 1975 (Revised March 13, 1979)

	Primary Standards				
	Annual	1 hour Max.	3 hour Max.	8 hour Max.	24 hour Max.
Sulfur Oxides (Sulfur Dioxide)	(1) 80 ug/m^3				(2) 365 ug/m^3 (0.14 ppm)
Particulate Matter	(3) 75 ug/m^3				(2) 260 ug/m^3
Carbon Monoxide		(2) 40 mg/m^3 (35 ppm)		(2) 10 mg/m^3 (9 ppm)	
Photochemical Oxidants (Ozone)		(5) 235 ug/m^3 (0.12 ppm)			
Non-methane Hydrocarbons			(2)(4) 160 ug/m^3 (0.24 ppm)		
Nitrogen Oxides (Nitrogen Dioxide)	(1) 100 ug/m^3 (0.05 ppm)				

	Secondary Standards				
	Annual	1 hour Max.	3 hour Max.	8 hour Max.	24 hour Max.
Sulfur Oxides (Sulfur Dioxide)			1300 ug/m^3 (0.5 ppm)		
Particulate Matter	(3) 60 ug/m^3				(2) 150 ug/m^3
Carbon Monoxide		(2) 40 mg/m^3 (35 ppm)		(2) 10 mg/m^3 (9 ppm)	
Photochemical Oxidants (Ozone)		(5) 235 ug/m^3 (0.12 ppm)			
Non-methane Hydrocarbons			(2)(4) 160 ug/m^3 (0.24 ppm)		
Nitrogen Oxides (Nitrogen Dioxide)	(1) 100 ug/m^3 (0.05 ppm)				

(1) Annual Arithmetic Mean
(2) Not to Be Exceeded More than Once per Year
(3) Annual Geometric Mean
(4) Measured between 6 a.m. and 9 a.m.
(5) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 parts per million is equal to or less than 1, as determined by Appendix H for Part 50 of Chapter I, Title 40 of the Code of Federal Regulations.

4/1/79

Regulation No. 4

Pertaining to the Registration of Air Contaminant Sources

4.0 The purpose of this regulation is to provide the Council with data whereby they might determine conditions of air pollution, as between particular air contaminant sources and as between particular areas of the state, such as urban, suburban, and rural areas.

4.1 Registration of Potential Sources of Air Contaminants

(a) The owner or operator of any potential air contaminant source on the effective date of this regulation shall at such time as requested, file with the Council information as to the nature of the air contaminant source including such information as would be needed or useful in evaluating the potential of the source for causing air pollution.

(b) The following information may be included for each source: total weight of the contaminant released per day; period or periods of operation; composition of the contaminant; physical state of the contaminant; temperature and moisture content of the air or gas stream at the point where released into the atmosphere and such other information as may be specifically requested by the Director. Where an air or gas cleaning device is incorporated in the air or gas stream preceding discharge to the atmosphere, the weight of material removed by the cleaning device, as well as the weight emitted, shall be stated.

4.2 Confidentiality of Proprietary Information

No person shall disclose to anyone other than the Air Pollution Council, the Commissioner, or a Court of competent jurisdiction any information furnished or obtained pursuant to this regulation. Emission data must be made available at all times to the public during working hours.

Upon request of the interested party or parties, all hearing in which proprietary information is to be divulged shall be held "in camera" and such information shall be sealed and access otherwise limited. Emission data shall never be considered "proprietary" for purposes of these regulations and must be available at all times to the public during normal working hours.

Regulation No. 5

Pertaining to the Type, Operation and Maintenance of Incinerators and Defining Acceptable Emissions Emitting Therefrom

5.0 Regulation of Incinerators

The purpose of this regulation is to deem it unlawful to burn refuse in any incinerator except in a multiple-chambered incinerator or in equipment determined by the Director to be equally effective for the purpose of air pollution control.

This regulation shall become operative one year from and after its effective date. It will apply to any and all incinerators utilized within the State of Oklahoma.

5.1 No person shall cause, suffer, allow, or permit the discharge of smoke from an incinerator of a density darker than number one (1) on the Ringelmann Chart or a visible emission of such an equivalent opacity as to obscure a certified visible emission evaluator's view to a degree greater than number (1) on the Ringelmann Chart.

5.12 Paragraph 5.1 of this regulation shall not apply to:

5.121 Visible emissions consisting of uncombined water droplets.

5.122 Smoke, the density of which is not darker than number three (3) of the Ringelmann Chart for a period aggregating no more than five (5) minutes in any sixty (60) consecutive minutes in any twenty-four (24) hour period.

5.2 No person shall cause or allow to be emitted into the open air from any incinerator equipment, fly ash or other particulate matter in quantities greater than shown in Figure 1. Solid fuels charged will be considered as part of the refuse weight, but No. 1 and No. 2 fuel oil and gaseous fuels and combustion air will not be so considered.

5.3 Hereafter no person shall operate an incinerator unless:

5.31 It is provided with an auxiliary burner for the purpose of maintaining a temperature of at least 800°F. in the primary combustion chamber.

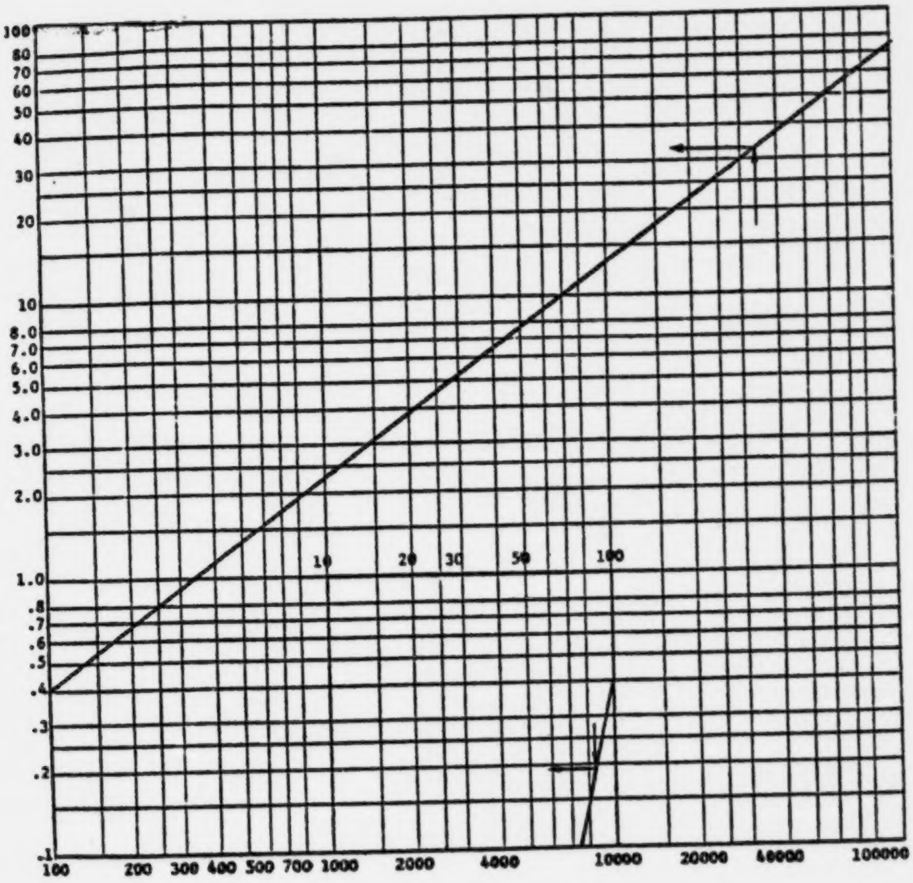
5.32 It has a secondary burner for use when necessary to eliminate smoke.

5.33 It is a type of incinerator design that can be demonstrated to the Director to be effective in accordance with the provisions of this regulation. The burden of proof shall rest upon the owner of the proposed incinerator.

5.34 Comply with generally recognized good practices and all applicable provisions of this regulation.

5.35 Make full and proper use of all components and appurtenances thereof.

Figure 1. ALLOWABLE EMISSION OF PARTICULATES FROM INCINERATORS



Refuse Charged in Pounds per Hour

Allowable Emission Rate May Be Calculated Using the Following Formula for values of $X \geq 100$:

$Y = 0.01221X^{+.7577}$

X = Refuse Charged, lb./hr.
Y = Allowable Emission, lb./hr.

Regulation No. 6

Pertaining to the Control of the Emission of Particulate Matter from Fuel-Burning Equipment

6.0 Emission of Particulate Matter is Prohibited

The emission or escape into the open air of particulates resulting from the combustion of fuel in any fuel-burning equipment or from any stack connected thereto in quantities in excess of that indicated in Table 1 or in Figure 1 is hereby prohibited.

6.1 Existing from Fuel-Burning Equipment

Any fuel-burning equipment in operation prior to the effective date of this regulation shall not emit particulate matter in excess of 0.6 pounds per million B.T.U. heat input provided that all such existing equipment shall comply with paragraph 6.0 of this regulation within eighteen (18) months from and after the effective date of this regulation.

6.2 The emission or escape into the open air of particulate matter resulting from the combustion of fuel in any fuel-burning equipment in quantities exceeding the limits specified in Table 1 for the size of equipment involved, is prohibited. These limitations shall apply when the fuel-burning equipment is operating at maximum design heat input rating. The heat input rating of any unit discharging to a single stack shall be the maximum design input rating, including both heat available from burning of fuel and any sensible heat from materials introduced into the combustion zone of a standard temperature of 60°F. For a heat input between any two (2) consecutive heat inputs stated for Table 1 of this regulation, maximum allowable emission of particulate matter are shown on Figure 1. When one fuel-burning unit is connected to two or more stacks, the heat input of the equipment shall be the criterion for the maximum allowable total emission from all stacks combined.

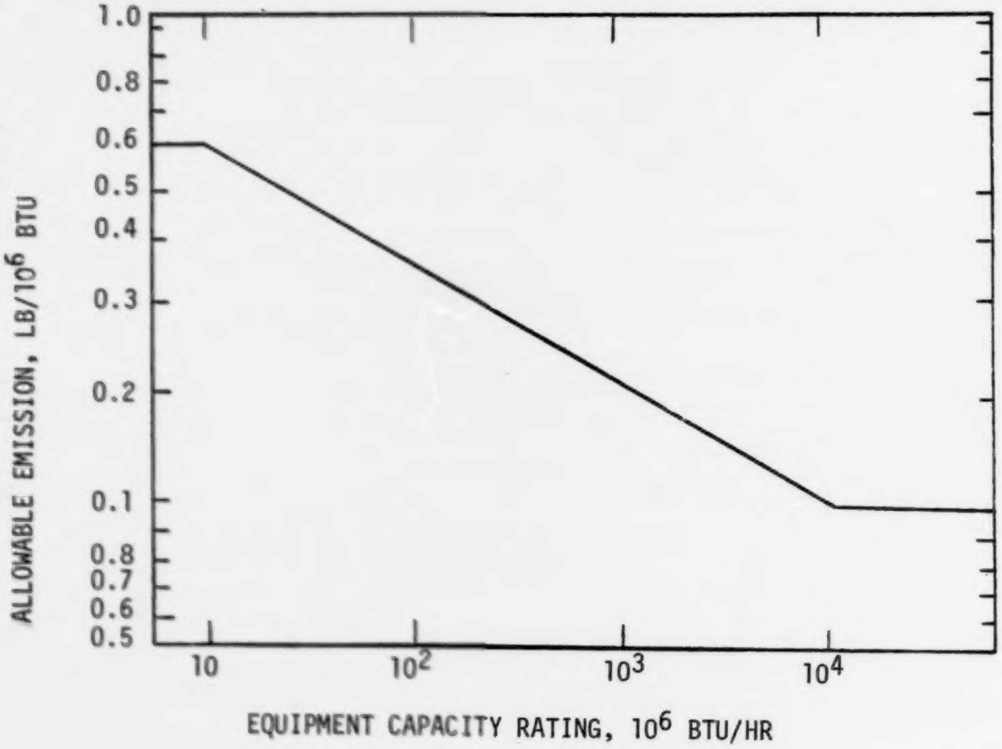
6.3 The burning of refuse in fuel-burning equipment is prohibited except in equipment specifically designed to burn refuse.

Table 1.

Heat Input in Million British Thermal Units per hour	Maximum Allowable Emissions of Particulate Matter in Pounds per Million British Thermal Units
Up to and including 10	0.60
100	0.35
1,000	0.20
10,000 and above	0.10

Figure 1.

Particulate Matter Emission Limits for Fuel-Burning Equipment



*Regulation No. 7

Pertaining to the Control of Smoke, Visible Emissions and Particulates

7.0 General Prohibition

7.01 No person owning, leasing, or controlling the operation of any air contaminant source shall willfully, negligently, or through failure to provide necessary equipment or facilities or to take necessary precautions, permit the emission from said air contaminant source of such quantities of air contamination as will cause a condition of air pollution.

7.02 All existing installations shall comply with this regulation within 18 months of its effective date.

7.1 Smoke and Visible Emissions

7.11 No person shall cause, suffer, allow, or permit discharge of smoke of a density darker than number one (1) on the Ringelmann Chart.

7.12 Paragraph 7.11 shall not apply to:

7.121 Smoke emitted during the cleaning of a fire, the building of a new fire or the blowing of soot from boilers, or other short-term occurrences, the density of which is not darker than number three (3) on the Ringelmann Chart for a period aggregating no more than five (5) minutes in any sixty (60) consecutive minutes or more than 20 minutes in any 24-hour period.

7.122 Smoke resulting from fires covered by the exceptions outlined in Regulation No. 1.

7.13 If a person shall cause, suffer, allow or permit discharge of a visible emission of such an equivalent opacity as to obscure a certified visible emission evaluator's view to a degree greater than number one (1) on the Ringelmann Chart, the operator of the source shall, at the discretion of the Director, supply material balance data relating to the actual emissions.

7.14 Paragraph 7.13 shall not apply to visible emissions consisting of uncombined water droplets.

7.2 To insure compliance with this regulation, the Director, with the approval of the Council, may require that an automatic recording emission indicator be installed in such a manner that a record is made at all times of the density or equivalent opacity of such emissions.

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* Variance for U.S. Army Ammunition Plant, McAlester Bomb Plant B. See Federal Register Publication 5/26/81, Non-Regulatory.

*Regulation No. 8

Pertaining to the Control of the Emission of Particulate Matter from Industrial and Other Processes and Operations

8.0 General Provisions

This regulation applies to any operation, process or activity except fuel-burning equipment or refuse-burning equipment.

8.1 Process Emission Limitations

8.11 Existing installations. Eighteen (18) months from and after the effective date of this regulation all existing installations must comply with the rates of emissions as specified in Table 1.

8.12 New installations. From and after the effective date of this regulation, all new installations must comply with the rates of emission as specified in Table 1.

8.13 No person shall cause, let, permit, suffer, or allow the emission from any general operation or general combustion operation of particulate matter from any emission point at a rate in excess of that specified in Table 1 for the process weight rate allocated to such emission point.

8.2 Exception to Emission Limits

8.21 Temporary emissions. Emission of particulate matter during periods of cleaning or adjusting process equipment shall not exceed 150 percent of the limits as set forth in the above sections for a period or periods aggregating not more than six (6) minutes in any sixty (60) consecutive minutes. In those operations utilizing control devices which require regular intermittent cleaning, compliance with this regulation will be determined on the basis of the average hourly emission.

8.3 Sampling and Testing

8.31 A person responsible for the emission of particulates from any source shall, upon written request of the Director, make or have made at his own expense, tests to determine the quantity or quality or both. Alternatively, said person shall be reasonably cooperative with the Director in securing such tests.

8.32 Emission tests relating to the regulation shall be undertaken by generally recognized standards or methods of measurements. Methods found in the current ASME Test Code for Dust Separating Apparatus, the ASME Power Test Code, the Code for Determining Dust Concentrations in Gas Streams and the Los Angeles County Source Testing Manual may be used, but these may

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* Variance for U.S. Army Ammunition Plant, McAlester Bomb Plant B. See Federal Register Publication 5/26/81, Non-Regulatory.

be modified or adjusted by the Director, in cooperation with the operator of the source, to suit specific sampling conditions or needs based upon good judgment and experience. Other methods found to produce reliable results and approved by the Director may be used.

8.33 All tests shall be conducted, supervised or approved by a registered professional engineer.

Table 1.

ALLOWABLE RATE OF EMISSION BASED ON ACTUAL PROCESS WEIGHT RATE

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8	16.5
200	0.10	0.877	18,000	9	17.9
400	0.20	1.40	20,000	10	19.2
600	0.30	1.83	30,000	15	25.2
800	0.40	2.22	40,000	20	30.5
1,000	0.50	2.58	50,000	25	35.4
1,500	0.75	3.38	60,000	30	40.0
2,000	1.00	4.10	70,000	35	41.3
2,500	1.25	4.76	80,000	40	42.5
3,000	1.50	5.38	90,000	45	43.6
3,500	1.75	5.96	100,000	50	44.6
4,000	2.00	6.52	120,000	60	46.3
5,000	2.50	7.58	140,000	70	47.8
6,000	3.00	8.56	160,000	80	49.0
7,000	3.50	9.49	200,000	100	51.2
8,000	4.00	10.4	1,000,000	500	69.0
9,000	4.50	11.2	2,000,000	1,000	77.6
10,000	5.00	12.0	6,000,000	3,000	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 4.10\,P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation;

$E = 55.0\,P^{0.11} - 40$, where E = rate of emission in lb/hr and
P = process weight rate in tons/hr.

Regulation No. 9

Control of Fugitive Dust

9.1 No person shall cause or permit the handling, transporting, or disposition of any substance or material which is likely to be scattered by the air or wind, or is susceptible to being air-borne, or wind-borne, or to operate or maintain or cause to be operated or maintained, any premise, open area, right-of way, storage pile of materials, vehicle, or construction, alteration, demolition, or wrecking operation, or any other enterprise, which involves any material or substance likely to be scattered by the wind or air, or susceptible to being wind-borne or air-borne that would be classified as air pollution without taking reasonable precautions or measures to minimize atmospheric pollution.

9.2 No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property lines on which the emissions originate in such a manner as to damage or to interfere with the use of ajacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards.

9.3 In areas designated as of this date as Air Quality Maintenance Areas or Nonattainment Areas for particulates, the Commissioner shall require specific reasonable percautions and may include, but shall not be limited to the following:

9.31 Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, driveways and parking lots or the clearing of land for commercial, industrial, or residential development;

9.32 Application of water or suitable chemicals or some other covering on materials stockpiles, and other surfaces which can create air-borne dusts under normal conditions;

9.33 Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials or the use of water sprays or other acceptable measures to suppress the dust emission during handling. Adequate containment methods shall be employed during sandblasting or other similar operations;

9.34 Covering or wetting when in motion, of open-bodied trucks, trailers, or railroad cars transporting materials in areas where the general public must have access which can create air-borne particulate matter;

9.35 Removal as necessary from paved street and parking surfaces of earth or other material which have a tendency to become air-borne;

9.36 The planting and maintenance of vegetative ground cover as necessary.

9.4 Paragraph 9.3 shall not apply to the clearing or preparation of land used solely for agricultural purposes. For the purpose of this regulation, "agricultural purposes" shall be limited to the raising of livestock or crops for food or fiber.

9.5 Uses of potential variance from Regulation No. 9 are subject to review, approval, and/or denial of the requested variance by the Air Quality Council.

Regulation No. 11

Malfunction of Equipment, Reports Required

11.1 In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Commissioner at least twenty-four (24) hours prior to the planned shutdown. Such prior notice shall include, but is not limited to the following:

(a) Identification of the specific facility to be taken out of service as well as its location and permit number.

(b) The expected length of time that the air pollution control equipment will be out of service.

(c) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.

(d) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.

(e) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.

11.2 In the event that any emission source, air pollution control equipment, or related facility breaks down in such a manner as to cause the emission of air contaminants in violation of these regulations, the person responsible for such equipment shall immediately notify the Commissioner of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Commissioner shall be notified when the condition causing the failure or breakdown has been corrected and the equipment is again in operation.

Regulation No. 12

Sampling and Testing Methods

12.1 All tests shall be made and the results calculated in accordance with test procedures approved by the Commissioner. All tests shall be made under the direction of a person qualified by training and/or experience in the field of air pollution control.

12.2 The Commissioner may conduct tests of emissions of air contaminants from any source. Upon request of the Department, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts to provide compliance with procedures approved by the Commissioner, and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

Regulation No. 13

Monitoring of Emissions, Recording and Reporting of the Same Are Required

13.1 The Commissioner may require the owner or operator of any air contaminant source to install, use, and maintain such monitoring equipment; sample such emissions in accordance with methods as the Commissioner shall prescribe; establish and maintain such records; and make such periodic emission reports as required in Section 13.2.

13.2 Records and reports as the Commissioner shall prescribe on air contaminants of fuel shall be recorded, compiled, and submitted on forms furnished by the Commissioner. (The procedures below are examples of such requirements.)

(a) Emissions of particulate matter, sulfur dioxide, and oxides of nitrogen shall be expressed as follows: in pounds per hour and pounds per million B.t.u of heat input for fuel-burning equipment; in pounds per hour and pounds per 100 pounds of refuse burned for incinerators; and in pounds per hour and in pounds per hourly process weight or production rate or in terms of some other easily measured and meaningful process unit specified by the Commissioner.

(b) Sulfur dioxide and oxides of nitrogen emission data shall be averaged over a 24-hour period and shall be summarized monthly. Daily averages and monthly summaries shall be submitted to the Commissioner biannually. Data should be calculated daily and available for inspection at any time.

(c) Particulate matter emissions shall be sampled and submitted biannually.

(d) Visible emissions shall be measured continuously and records kept indicating total minutes per day in which stack discharge effluent exceeds 20 percent opacity. Data should be summarized biannually. Current daily results shall be available for inspection at any time.

(e) The sulfur content of fuels, as burned, except natural gas, shall be determined in accordance with current recognized ASTM procedures. Daily and monthly averages shall be submitted biannually. Daily records shall be kept current and be available for inspection.

Regulation No. 14

Air Resources Management
(Permits) (As Amended)

14.1 Scope and Purpose

Pursuant to the Oklahoma Clean Air Act as amended, this regulation is adopted to define Air Resource Management Requirements to protect and enhance Oklahoma Clean Air Resources and assure attainment/maintenance of the ambient air quality through the utilization of a construction/operation permit system.

14.2 General Requirements

The Air Quality Service shall operate for the State of Oklahoma a dual permitting system for all new stationary/portable facilities/sources to be established in Oklahoma. The first permit is authorization to construct and is issued upon a determination by the Commissioner that the new source has complied with all administrative and preliminary procedures and is so designed as to assure that the emission limitations of the several control regulations will be met. The second permit is a permit to operate and is issued by the Commissioner upon demonstration that the source was constructed as designed and the facility does meet the requirements of the several control regulations. Issuance of a permit is evidence that the source has met all State and local requirements, however, upon proper showing this can be refuted State and local requirements, however, upon proper showing this can be refuted by the State or a third party and in such a case the permit does not relieve the source of the responsibility to comply with all local or State regulations.

14.3 Authority to Construct/Operate

a. No person shall cause or allow the construction or modification of any source without first obtaining an authority to construct or modify from the Commissioner as to comply with all applicable air pollution rules and regulations.

b. An application will be required for each new source subject to rules and regulations. To aid in the evaluation, additional applications may be required by the Commissioner.

c. Each application shall be made on a form to be supplied by the Commissioner and signed by the applicant. The signature of the applicant shall constitute an agreement that the application and all supplemental data is true and correct and that the applicant is responsible for assuring construction in accordance with the application and operation in accordance with all rules and regulations.

d. Attached to the application form and considered a part thereof will be supplemental data as prescribed in application instruction/guidelines provided by the Commissioner. This supplemental data shall include, but is not limited to site information, process description, emission data, ambient air modeling data, etc., as specified in this regulation and the aforementioned instructions/guidelines.

e. The new source will, if required by the Commissioner, be provided with sampling ports, instrumentation to monitor and record emission data and other sampling and/or testing facilities.

f. The application and supplemental data will be provided in three copies to the Air Quality Service or its delegatee for evaluation.

14.31 The Commissioner will accomplish an air quality analysis for all proposed new or modified sources based on information provided by the applicant and other information available to the Commissioner. No permit to construct or modify will be issued by the Commissioner until he is satisfied that applicant has complied with all pertinent requirements and the proposed source conforms to general intent of applicable laws and regulations.

14.312 Attainment Areas

a. Source Applicability

The requirements of this subsection (Reg. 14.312) shall be applicable to all new or modified major sources commencing construction after the date of adoption of this regulation by the Board of Health. Except that sources previously permitted or being excepted from permitting by the Federal Environmental Protection Agency under Title 40, Part 52 of the Code of Federal Regulations (40 CFR 52) shall not be required to duplicate the requirements levied hereby.

b. Control Technology

(i) The source must demonstrate that the control technology to be applied is the best that is available for each pollutant controlled under air pollution control regulations if such pollutant would cause the source to be defined as a major source. This determination will be made on a case by case basis taking into account energy, environmental and economic impacts and other cost determined to be achievable for such source. In no event shall this determination allow emission of any pollutant which will exceed the allowable by any standard established pursuant to the Oklahoma Clean Air Act or Sections 111 or 112 of the Federal Clean Air Act.

(ii) For phased construction projects, the foregoing determination may be reviewed and revised for the latter phases at the discretion of the Commissioner.

c. Air Quality Review

The owner/operator of the proposed source must demonstrate that emissions from such source, in conjunction with applicable emissions from any other source will not cause or substantially contribute to air pollution in excess of:

(i) Any established ambient air standard.

(ii) Any maximum allowable increase above an applicable Prevention of Significant Deterioration baseline concentration.

(iii) Provided, however, concentrations resulting from Federal Department of Energy orders or mandated plans may be disregarded in determining violations of this subsection within five years of such orders or plan activation.

d. Modeling and Monitoring

(i) The requirements of subsection (c), preceding, shall be based on applicable air quality models, data bases and other requirements as approved by the Commissioner and accomplished by the applicant.

(ii) The Commissioner may require ambient air monitoring, not to exceed one year's data, to determine whether emissions from the proposed source will exceed the limitations prescribed in subsection (c) preceding. Further, the Commissioner may require ambient air monitoring post operation for a period of one year as a limitation authorized in subsection 14.41.

(iii) The Commissioner may require continuous stack emission monitors as the Commissioner deems necessary on major sources.

e. Source Information

The owner/operator shall provide such information as may be necessary, in the opinion of the Commissioner, to perform any impact analysis or determination required under this regulation. Such information may include, but is not limited to:

(i) The source/facilty location, design, capacity, operating schedule, construction schedules, cost, emission estimates (both uncontrolled and controlled), stack data and stack sampling facilities' description.

(ii) Information on air quality impact of growth associated with the source.

f. Visibility Welfare Analysis/Assessment

In the event that the proposed source is computed to have emissions in excess of 50 tons per year or 1000 pounds per day or 100 pounds per hour, with controls, then the permit application will contain an analysis on the impairment of visibility and an assessment of any anticipated adverse impacts on soils and vegetation in the vicinity of the source resulting from construction of the source. Further, upon presentation of good and sufficient information, by a Federal land manager, the Commissioner may deny the issuance of a permit for a source, emission from which will adversely impact areas heretofore or hereafter categorized as Class I areas even though the emissions would not cause the increment for such Class I area to be exceeded.

g. Variances in Class I Areas

Permits may be issued at variance to the limitations imposed on a Class I area in compliance with the procedures and limitations established in State and Federal Clean Air Acts.

h. Stack Heights

The degree of emissions limitations required for any air pollutant under this section shall not be affected in any manner by:

(i) So much of the stack height of any source as exceeds good engineering practice.

(ii) Any other dispersion technique.

14.313 Nonattainment Areas

In the event a major new source or major modification of a source of a given pollutant is proposed to be located in or is shown to impact upon a designated nonattainment area of the pollutant or is to be located in an attainment area wherein the Prevention of Significant Deterioration increment has been consumed, the following requirements must be met in addition to those of section 14.312:

a. The proposed source must demonstrate that its control technology is the best that is available notwithstanding cost (i.e., lowest achievable emission rate as defined in Federal Clean Air Act).

b. The proposed source must demonstrate all other major sources owned or operated by such person in this State are in compliance or is on a schedule for compliance with all applicable limitations and standards under this Act and the Federal Clean Air Act.

c. The owner/operator of the proposed major source must demonstrate that upon commencing operations:

   (i) The emissions from the proposed source and all other sources permitted in the area do not exceed the planned growth allowable for the area designated in the State Implementation Plan or;

   (ii) The total allowable emissions from existing sources in the region and the emissions from the proposed facility will be sufficiently less than the total emissions from existing sources allowed under the Implementation Plan at the date of permit to construct applications so as to represent further progress toward attainment or maintenance of the problem area.

d. The owner/operator may present with the application an analysis of alternative sites, sizes and production processes for such proposed source.

14.32 Permit Conditions

The Commissioner may establish permit limitations as necessary to assure all rules and regulations are complied with. A violation of these limitations by the owner/operator shall subject such to any or all enforcement penalties, including permit revocation, available under the Oklahoma Clean Air Act and Air Pollution Control Regulations.

14.33 Relocation Permits

a. Any purported or attempted transfer of a source from one location to another without the authority of the Commissioner automatically voids the permit or the grandfather exemption for that source.

b. The Commissioner may authorize the relocation of portable sources which were previously permitted or existing sources within attainment regions of this State in exception to the requirements of subsection 14.31. However, this authorization shall be limited to two years. Failure of the source to change its locale within the two year time period will be considered prima facie evidence that the source is a stationary source and subject it, at that time, to the analysis requirements of 14.31.

14.34 Public Review

a. Within 30 days after receipt of all information required to accomplish the analysis required in subsections 14.31 and 14.32, the Air Quality Service will make a determination whether the source should be approved, approved with conditions, or disapproved.

b. Upon this determination, the Commissiner will, for major sources:

(i) Make available, for 30 calendar days in at least one location in the county the proposed source is to be constructed, a copy of all materials submitted by the owner/operator, a copy of or summary of other materials and a copy of the analysis thereof made by the reviewing authority and;

(ii) Provide the applicant with instructions concerning his required actions toward notification of the public by prominent advertisement in a newspaper of general circulation in the county in which the new source will be constructed. As a minimum this notification will be paid notice in a form as prescribed by the Commissioner to run once a week for two weeks. The 30 day period specified in subsection (i) will be deemed to commence as of the first running of the specified notice.

(iii) The public notice, as specified, will be sufficient to notify all sub-state entities and their representatives of the proposed source.

(iv) Consider all written public comments submitted within the 30 day period and any written or oral comments presented at any public hearing held in compliance with subsection 14.34(c) before issuance of the permit. In this regard the Commissioner may refer pertinent questions to the applicant for response or more information before issuing the permit.

c. The Commissioner may, upon request of any interested party and their submission of adequate reason, within the first 21 calendar days of the 30 day public notice, cause to be set a public hearing concerning the issuance of the proposed permit. In these cases, the burden will be upon the petitioner to show and the hearing will be limited to one or more of the following issues:

(i) The level of control technology to be used is inadequate for the facility/source type or its location or;

(ii) The inadequacy of the ambient air modeling technique or its application or;

(iii) The availability of increment for growth either for prevention of significant deterioration in attainment areas or SIP growth increment in nonattainment areas.

d. In the case of a major source, as defined by Congress, that might impact the air quality of a neighboring State, the comment period for that State is extended to a 60 day period as required by Section 126 of the Federal Clean Air Act.

14.35 Cancellation of Authority to Construct or Modify

a. A duly issued permit to construct or modify will terminate and become null and void if the construction is not commenced within one year of the permit issuance date or if work is suspended for more than one year after it has commenced.

b. An applicant may secure an extension of the expiration date by written request to the Commissioner stating the reason for the delay/suspension and providing reason for the extension.

14.36 Permit Fees

a. The applicant for a permit to construct, operate or relocate will attach a check or money order in the amount of thirty-five dollars ($35.00) as an initial processing fee.

b. After evaluation and prior to issuance of the construction permit, an additional fee will be charged and collected in accordance with the following schedule:

(i) Each major source operation - $300.00

(ii) Each minor source operation - No fee.

(iii) Relocation Permit - No fee.

c. Fees will be paid by check or money order (no cash will be accepted) made payable to the reviewing agency, e.g., State Health Department (Air Quality Service).

14.4 Authority to Operate

a. No person shall begin operation of a new source without notifying the Commissioner at least 30 days prior to operation.

b. No person shall cause or permit the operation of a new source for more than sixty (60) day period without applying for a permit to operate from the Commissioner. Application will be made on forms provided by the Commissioner.

c. No owner or operator shall cause or permit the operation of a new source if the Commissioner denies or revokes a permit to operate.

d. Before a permit to operate a new source is granted the applicant, if required by the Commissioner, shall conduct emissions tests in accordance with methods approved by the Commissioner with the tests being made at the expense of the applicant. The Commissioner may monitor performance tests conducted by the applicant and may also conduct emissions test. Further, the results of any required test must be provided to the Commissioner along with supporting information as required.

14.41 Permit Conditions

a. Emissions limitations established and made a part of the construction permit are carried over, incorporated into and are enforceable limitations of the subsequently issued operating permit.

b. Permit limitations in adjustment of or in addition to the construction permit limitations may be made as a condition of operating permit issuance.

Regulation No. 15

Control of Emissions of Organic Materials

15.1 Purpose

The purpose of this regulation is to control the emission of organic materials from stationary sources to protect and enhance the air quality to insure that the Oklahoma air quality standard is not exceeded and significant deterioration prevented.

15.12 Definitions

A. Effluent Water Separator - any tank, box, sump, or other container in which any material compound floating on or entrained or contained in water entering such tank, box, sump or other container is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.

B. Submerged Fill Pipe - means any fill pipe or discharge nozzle which meets any one of the following conditions:

  a. The bottom of the discharge pipe or nozzle is below the surface of liquid in the receiving vessel for at least 95 percent of the volume filled.

  b. The bottom of the discharge pipe or nozzle is less than 6 inches from the bottom of the receiving vessel.

  c. The bottom of the discharge pipe or nozzle is less than 2 pipe or nozzle diameters from the bottom of the receiving vessel.

  d. Other equivalent methods acceptable to the Commissioner.

C. Volatile Organic Compound - any compound containing carbon and hydrogen or containing carbon and hydrogen in combination with any other element which has a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions.

D. Organic Solvents - organic materials including diluents and thinners which are liquids at standard conditions, and which are used as dissolvers, viscosity reducers or cleaning agents, except that such materials which exhibit a boiling point higher than 220°F at 0.5 millimeter of mercury absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 220°F. However, the following listed materials are presently judged to be suitable for exclusion to any control- methane, ethane, 1,1,1 - trichloroethane (methyl chloroform), trichlorotrifluoroethane (freon 113) and methylene chloride (dichloromethane).

E. Organic Materials - chemical compounds of carbon excluding carbon monoxides, carbon dioxide, carbonic acid, metallic carbides, metal carbonates and ammonium carbonates.

F. Cutback Asphalt - is basic asphalt or asphaltic concrete containing a pertroleum distillate. asphaltic

G. Refinery - means any facility engaged in producing gasoline, kerosene, fuel oils, or other products through distillation of crude oil or through redistillation, cracking, or reforming of unfinished petroleum derivatives.

H. Alkyd Primer - a chemical coating composed primarily of alkyd applied to a surface to provide a firm bond between the substrate and any additional paint.

I. Vinyl - a chemical coating containing plasterized or unplasterized polymers and co-polymers of vinyl acetate, vinyl chloride, polyvinyl alcohols, or their condensation products and the primary mode of cure is solvent evaporation.

J. Nitrocellulose Lacquers - a chemical coating containing nitrocellulose and suitable resinous modifiers, and whose primary mode of cure is solvent evaporation.

K. Acrylic - a chemical coating containing polymers or co-polymers of acrylic or substitute acrylic acid in combination with suitable resinous modifiers and its primary mode of cure is solvent evaporation.

L. Epoxy - a chemical coating containing epoxy groups and suitable chemical cross-linking agents. Epoxies prime mode of cure involve a chemical reaction between the epoxy and the cross-linking agent.

M. Maintenance Finishes - a chemical coating formulated to form a protection of a given substrate to adverse chemical or physical condition.

N. Custom Product Finishes - a proprietary chemical coating designed for a specific customer and end use.

15.20 Control of Volatile Organic Compounds

15.21 Storage of VOC

15.211 No person shall build, sell, or install or permit the building or installation of any new stationary tank, reservoir or other container of more than 40,000 gallons (150,000 liters) capacity which will be used for storage of any organic materials, unless such tank, reservoir or other container is to be a pressure tank capable of maintaining working pressures sufficient at all times to prevent organic vapor or gas loss to the atmosphere or is designed, and will be built and equipped with one of the following vapor-loss control devices:

(a) A floating roof, consisting of pontoon type, internal floating cover of double-deck type roof, which will rest on the surface of the liquid contents and be equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. Such floating roofs are not appropriate control devices if the organic materials have a vapor pressure of 11 pounds per square inch absolute (568 mm Hg) or greater under actual conditions. All gauging and sampling devices shall be gastight except when gauging or sampling is taking place.

(b) A vapor-recovery system consisting of a vapor-gathering system capable of collecting 85 percent or more of the uncontrolled organic material that would otherwise be emitted to the atmosphere; and vapor-disposal system capable of processing such organic material so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gastight except when gauging or sampling is taking place.

(c) Other equipment or means of equal efficiency for purposes of air pollution control as may be approved by the Commissioner.

15.212 No person shall build, sell, or install or permit the building or installation of a new stationary organic material storage tank with a capacity of 400 gallons (1,520 liters) or more unless such tank is equipped with a permanent submerged fill pipe or is equipped with an organic material vapor-recovery system as required in subsection 15.211.

15.22 Loading of Volatile Organic Compounds

15.221 Loading facilities with throughput greater than 40,000 gallons/day. No person shall build or install or permit the building or installation of a stationary organic material loading facility having a throughput greater than 40,000 gallons per day from its aggregate loading pipes unless such loading facility is equipped with a vapor-collection and disposal system or bottom loading with closed hatches, properly installed, in good working order and in operation.

When loading in a vapor-collection and disposal system is effected through the hatches of a tank truck or trailer with a loading arm equipped with a vapor-collecting adaptor; pneumatic, hydraulic or other mechanical means shall be provided to force a vapor-tight seal between the adaptor and the hatch.

A means shall be provided in either system to prevent organic material drainage from the loading device when it is removed from any tank truck or trailer, or to accomplish complete drainage before removal.

When loading is effected through means other than hatches, all loading and vapor lines shall be equipped with fittings which make vapor-tight connections and which must be closed when disconnected or which close automatically when disconnected.

The vapor-disposal portion of the system shall consist of one of the following:

(a) A vapor-liquid absorber system with a minimum recovery efficiency of 90 percent by weight of all the organic material vapors and gases entering such disposal system.

(b) A variable-vapor space tank, compressor, and fuel-gas system of sufficient capacity to receive all organic material vapors and gases displaced from the tank trucks and trailers being loaded.

15.222 Loading facilities with throughput equal to or less than 40,000 gallons per day. No person shall build or install or permit the building or installation of a stationary organic material loading facility having a throughput of 40,000 gallons (150,000 liters) per day or less from its aggregate loading pipes unless each is equipped with a system for submerged filling of tank trucks or trailers properly installed, in good working order and operating in such a manner that a 97 percent submergence factor is maintained.

Subsection 15.222 shall apply to any facility which loads organic materials into any tank truck or trailer designed for transporting organic materials and having a capacity in excess of 200 gallons (760 liters).

15.23 Effluent Water Separators

No person shall build or install or permit the building or installation of a single- or multiple-compartment organic material water separator which received effluent water containing 200 gallons (760 liters) a day or more of any organic material from any equipment processing, refining, treating, storing or handling organic materials unless the compartment receiving said effluent water is equipped with one of the following vapor-loss control devices, properly installed, in good working order and in operation:

(a) A container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gastight except when gauging or sampling is taking place. The oil removal devices shall be gastight except when manual skimming, inspection and/or repair is in progress.

(b) A container equipped with a floating roof, consisting of a pontoon type, double-deck type roof, or internal floating cover, which will rest on the surface of the contents and is equipped with a closure seal, or seals, to close the space between the roof edge and container wall. All gauging and sampling devices shall be gastight except when gauging or sampling is taking place. The oil removal devices shall be gastight except when manual skimming, inspection and/or repair is in progress.

(c) A container equipped with a vapor-recovery system, consisting of a vapor-gathering system capable of collecting the organic material vapors and gases discharged and a vapor-disposal system capable of processing such organic material vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gastight except when gauging or sampling is taking place. The organic material removal devices shall be gastight except when manual skimming, inspection and/or repair is in progress.

(d) Containers equipped with controls of equal efficiency provided such equipment is submitted to and approved by the Commissioner.

15.24 Pumps and Compressors

No person shall build or install or permit the building or installation of any pump or compressor handling organic material compounds unless rotating type pumps and compressors are equipped with mechanical seals or other equipment of equal efficiency; or reciprocating type pumps and compressors are equipped with packing glands properly installed and in good working order such that the emissions from the drain recovery systems are limited to two cubic inches of liquid organic material in any 15 minute period at standard conditions per pump or compressor.

15.25 Waste Gas Disposal

15.251 Ethylene Manufacturing Emissions

No person shall build or install or permit the building or installation of any ethylene manufacturing plant unless the waste-gas stream under normal operating conditions is properly burned at 1,300 degrees F. for 0.3 seconds or greater in a direct-flame afterburner equipped with an indicating pyrometer which is positioned in the working area for the operator's ready monitoring or an equally effective catalytic vapor incinerator also with pyrometer. Proper burning of the waste-gas stream is defined as reduction by 98 percent of the ethylene emission originally present in the waste-gas stream.

15.252 Vapor Blowdown

Except where inconsistent with the "Minimum Federal Safety Standards for the Transportation of Natural and Other Gas by Pipeline," or any State of Oklahoma regulatory agency, no person shall emit organic gases to the atmosphere from a vapor recovery blowdown system unless these gases are burned by smokeless flares, or an equally effective control device as approved by the Commissioner.

15.26 Fuel-Burning and Refuse-Burning Equipment

No person shall cause or allow the emission of hydrocarbons or other organic materials from any fuel-burning or refuse-burning equipment. All such equipment shall be operated as to minimize such emissions. Among other things, such operation shall assure that the equipment is not overloaded, that it is properly cleaned and maintained, and that temperature and available air are sufficient to provide essentially complete combustion.

15.27 Exemptions

a. Organic materials as used in subsection 15.21 throughout 15.26 will not include: Methane (CH_4) or any material otherwise included which has vapor pressure of less than 1.5 pounds per square inch absolute under actual storage conditions.

b. Petroleum or condensate stored, processed and/or treated at a drilling or production facility prior to custody transfer is exempt from this regulation. This exemption also includes transfer and loading operations.

C. The storage, loading, processing, manufacturing or burning or organic materials used for agricultural purposes on farms and ranches is exempted from all provisions of subsections 15.21 through 15.26.

15.30 Coatings of Parts and Products

A. No owner or operator subject to the provision of this regulation shall discharge or cause the discharge into the atmosphere from an existing coating line or individual coating operation any organic solvent in excess of the amounts listed in Table No. 1, per gallon of coating, excluding water, delivered to the coating applicator.

Table No. 1

Pounds of Organic Solvent
per Gallons of Paint (Less Water)

Type of Coating	Jan. 79 Limit	Jan. 81 Limit	Jan. 82 Limit
Alkyd Primer	5.6	5.2	4.8
Vinyls	6.4	6.4	6.0
NC Lacquers	6.8	6.6	6.4
Acrylics	6.4	6.4	6.0
Epoxies	5.6	5.2	4.8
Maintenance Finishes	5.6	5.2	4.8
Custom Products Finishes	6.8	6.6	6.5

B. An owner/operator may develop a plant-wide emission plan instead of having each coating line comply with the emission limitations prescribed above, provided:

(a) The owner or operator demonstrates, by means of approved material balance or manual emission test methods, that sufficient reductions in organic solvents emissions may be obtained by controlling other facilities within the plant to the extent necessary to compensate for all excess emissions which result from one or more coating lines not achieving the prescribed limitation. Such demonstration shall be described in writing and shall include:

(1) A complete description of the coating line or lines which will not comply with the emission limitation in 15.30A.

(2) Quantification of emissions, in terms of pounds per day of organic solvents, which are in excess of the prescribed emission limitation for each coating line described under 15.30B(a)(1).

(3) A complete description of each facility and the related control system, if any, for those facilities within the plant where emissions will be decreased to compensate for excess emissions from each coating line described under 15.30B(a)(1).

(4) Quantification of emissions, in terms of pounds per day of organic solvents, for each facility described under 15.30B(a)(3) both before and after the improvement or installation of any applicable control system, or any physical or operational changes to such a facility or facilities to reduce emissions and the date on which such reductions will be achieved; and

(5) A description of the procedures and methods used to determine the emissions of organic solvents.

(b) The plant-wide emission reduction plan does not include decreases in emissions resulting from requirements of other applicable air pollution regulations. The plant-wide emission reduction plan may include decreases in emissions accomplished through installation or improvement of a control system or through physical or operational changes to facilities, including permanently reducing production or closing a facility, located on the premises of a surface-coating operation.

(c) The implementation of a plant-wide emission reduction plan instead of compliance with the emissions limitation prescribed in 15.30A has been expressly approved by the Commissioner. Upon approval, any emissions in excess of those established for each facility under the plan shall be a violation of these regulations.

C. No person shall discharge into the atmosphere more than 3,000 pounds of organic materials in any one day nor more than 450 pounds in any one hour from any article, machine, equipment or other contrivance in which any organic solvent or any material containing such solvent is employed or applied, unless such discharge has been reduced by at least 85 percent or has applied BACT or better as determined by the Commissioner.

D. Owners or operators of sources that are computed to emit less than 100 pounds of organic solvent per 24 hr./day are exempt from the requirements of this section.

15.31 Architectural Coatings (Reserved)

15.32 New Sources

Any new source calculated to emit an organic material to the atmosphere either as a solvent or a reactant will be subject to permitting under Regulation No. 14 Management of Air Resources and with the application of Best Available Control Technology.

15.33 (Reserved)

15.34 Clean Up with Organic Solvents

Emissions of organic materials to the atmosphere from the clean up with organic solvents, as defined in Section 15.12, of any article, machine, equipment or other contrivance used in applying coatings controlled in Sections 15.30 through 15.33, shall be included with the other emissions of organic solvents from the coating line or operation in determining compliance with those rules.

15.35 Alternate Standard

Emissions in excess of those permitted by Sections 15.30 through 15.32 of this regulation are allowable if both the following conditions are met:

A. Emissions that would result in the absence of control are reduced by:

   (1) 90 percent, by incineration; or

   (2) 85 percent, by absorption or any other process of equivalent reliability and effectiveness, and

B. No air pollution, as defined by the Clean Air Act, results.

15.40 Compliance Schedules

a. All equipment and process previously regulated under Regulation 15 and its effective dates of July 1, 1972 and December 1, 1974 must still abide by those dates.

b. In all areas except AQMA's, this regulation shall apply to all new installations of any equipment or processes described herein after the adoption of these amendments by the Oklahoma State Board of Health and submittal to the Secretary of State.

c. Provisions of this regulation relating to control of VOC shall aply to all new and existing installations of any equipment or processes in use and described in this regulation located in Air Quality Maintenance Areas (AQMA's) as classified by the Environmental Protection Agency with regard to hydrocarbons and photochemical oxidants, and become effective on adoption by the Oklahoma State Board of Health and submittal to the Secretary of State; provided, however, that existing installations shall have twenty-four (24) months from the effective date within which to comply with this regulation. Except that the retrofit requirements for crude petroleum storage tank will be limited to tanks of greater than 10,000 barrel capacity.

d. Provisions of this regulation relating to the control of organic solvent shall be as specified in the applicable section.

15.50 Non-Attainment Areas

In addition to any application of the foregoing, the following additional control/prohibitions shall be required on existing and new facilities located in the area declared to be a "non-attainment area" for photochemical oxidants (i.e., Tulsa and Oklahoma Counties).

15.51 Cutback Asphalt (Paving)

No owner, operator and/or contractor shall prepare or apply cutback liquified asphalt without the prior written consent of the Commissioner or the Commissioner's designee. Such consent may be granted during Oklahoma's non-oxidant season, i.e. October through April.

15.52 Vapor Recovery Systems

15.521 Vessels having a storage capacity of greater than 40,000 gallons (953 bbls). No person shall store or permit storage of gasoline or any volatile organic compound in tanks or vessels having a storage capacity greater than 40,000 gallons (953 bbls) unless such tank, reservoir or other container is to be a pressure tank capable of maintaining working pressures sufficient at all times to prevent organic vapor or gas loss to the atmosphere, or is equipped with one or more of the following vapor control devices:

a. A floating roof, consisting of pontoon type, internal floating cover or double-deck type roof, which will rest on the surface of the liquid contents. The floating roof shall be equipped with a closure seal, or seals to close the space between the roof edge and tank wall. Such floating roofs are not appropriate control devices if the organic compounds have a vapor pressure of 11.0 pounds per square inch absolute (568 mm Hg) or greater under actual conditions. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

b. A vapor-recovery system consisting of a vapor gathering system capable of collecting 90 percent by weight or more of the uncontrolled volatile organic compounds that would otherwise be emitted to the atmophere and vapor-disposal system capable of processing such organic compounds so as to prevent their emission to the atmosphere. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

c. Other equipment or methods of equal efficiency for purposes of air pollution control as may be approved by the Commissioner.

15.522 Storage of Volatile Organic Compounds 400-40,000 gallons (9.5-953 bbls). No person shall store or permit the storage of gasoline or other volatile organic compounds in any stationary storage container with a nominal capacity greater than 400 gallons (9.5 bbls) and less than 40,000 gallons (953 bbls) unless such container is equipped with a submerged fill pipe or is bottom filled. No person shall store or permit the storage of gasoline or other volatile organic compound in any stationary storage container with an average daily throughput of 30,000 gallons or greater unless the displaced vapors from the storage container are processed by a system that has a total collection efficiency no less than 90 percent by weight of total hydrocarbon compounds in said vapors.

a. The vapor recovery system shall include one or more of the following:

(1) A vapor-tight return line from the storage container to the delivery vessel and a system that will ensure that the vapor return line is connected before gasoline or volatile organic compounds can be transferred into the container.

(2) Other equipment that has a total collection efficiency no less than 90 percent by weight of the total hydrocarbon compounds in the displaced vapor provided that approval of the proposed design, installation, and operation is obtained from the Commissioner prior to start of construction.

b. Provided, however, that the requirements for vapor collection of displaced vapors shall not apply to operations that are not major sources.

15.523 Loading of Volatile Organic Compounds. No person shall operate, install or permit the building, operation or installation of a stationary volatile organic compound loading facility unless such loading facility is equipped with a vapor-collection and/or disposal system properly installed, in good working order and in operation.

When volatile organic compounds are loaded through the hatches of a transport vessel, a pneumatic, hydraulic or mechanical means shall be provided to ensure a vapor-tight seal at the hatch.

A means shall be provided to prevent organic material drainage from the loading device when it is removed from the transport vessel, or to accomplish complete drainage before removal.

When loading is effected through means other than hatches, all loading and vapor lines shall be equipped with fittings which make vapor-tight connections and which close automatically when disconnected.

The vapor collection and/or disposal portion of the system shall consist of one or more of the following in addition to bottom loading or submerged fill of transport vessels:

a. An absorption/adsorption system or condensation system with a minimum recovery efficiency of 90 percent by weight of all the volatile organic compound vapors and gases entering such disposal system.

b. A vapor handling system which directs all vapors to a fuel gas incineration system with a minimum disposal efficiency of 95 percent.

c. Other equipment of at least 90 percent efficiency, provided plans for such equipment are submitted to and approved by the Commissioner. Storage vessels, at service stations and bulk plants may be used for intermediate storage prior to recovery/disposal of vapors as per a, b, and c of this subsection if they are designed to prevent the release of vapors during use.

This subsection (15.523) shall apply to any facility which loads volatile organic compounds into any transport vessel designed for transporting volatile organic compounds. Provided, however, the provisions of the subsection shall not apply to loading facilities that are not major sources.

15.524 Transport/Delivery

a. The vapor-laden delivery vessel shall meet the following requirements:

(1) The delivery vessel must be so designed and operated as to be vapor-tight except when sampling, gauging or inspecting.

(2) The delivery vessel must be equipped and operated so that the volatile organic compound vapors are delivered to a vapor recovery/disposal system.

b. No owner/operator will allow a delivery vessel to be filled at a facility unable to receive displaced organic vapors nor service tanks unable to deliver displaced vapors except for tanks/facilities exempted in subsections 15.522 and 15.523.

15.53 Refinery Effluent Water Separators

No person shall operate, install or permit the operation or installation of a single or multiple compartment volatile organic compound water separator from any equipment processing, refining, treating, storing or handling volatile organic compound unless the compartment receiving said effluent water is equipped with one of the following vapor control devices, properly installed, in good working order and in operation:

a. A container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place. the oil removal devices shall be gas-tight except when manual skimming, inspection and/or repair is in progress.

b. A container equipped with a vapor-recovery system, consisting of a vapor-gathering system capable of collecting the organic material vapors and gases discharged and a vapor-disposal system capable of processing such organic material vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gas-tight except when gauging or sampling is taking place. The organic material removal devices shall be gas-tight except when manual skimming, inspection and/or repair is in progress.

c. Containers equipped with control of equal efficiency provided plans and specifications of such equipment are submitted and approved by the Commissioner.

15.54 Refinery Process Unit Turnaround

For the shutdown, purging and blowdown operation of any processing petroleum refinery processing unit the following procedures are required:

a. Recovery of volatile organic compounds (VOC) shall be accomplished during the shutdown or turnaround to a process unit pressure compatible with the flare or vapor system pressure. The unit will then be purged or flushed with a suitable material such as steam, water or nitrogen to a flare or vapor recovery system. The unit shall not be vented to the atmosphere until 90 percent of the volatile organic vapors are removed and disposed of.

b. Except where inconsistent with the "Minimum Federal Safety Standards for the Transportation of Natural and Other Gas by Pipeline," or any State of Oklahoma regulatory agency, no person shall emit organic gases to the atmosphere from a vapor recovery blowdown system unless these gases are ved burned by smokeless flares, or an equally effective control device as approved by the Commissioner.

c. At least fifteen days prior to a scheduled turnaround a written notification shall be submitted to the Commissioner. As a minimum, the notification shall indicate the unit to be shutdown, the date of shutdown, and the approximate quantity of hydrocarbons to be emitted to the atmosphere.

d. Schedule refinery unit turnaround may be accomplished without the controls specified in subsections 15.55a or 15.55b, during non-oxidant seasons provided the notification to the Commissioner as required in subsection 15.55c specifically contains such a request for such an exemption. Non-oxidant season is understood to be between the months of October and April.

15.55 Refinery Vacuum Producing System

Non-condensable volatile organic compounds from the following equipment shall be incinerated or reduced by 90 percent of what would be emitted from the following vacuum producing system:

a. Steam ejectors with barometric condensers

b. Steam ejectors with surface condensers

c. Mechanical vacuum pumps

Hot wells and accumulators shall be covered and the non-condensable vapors shall be vented to a fire-box or incinerator.

15.56 Metal Cleaning

15.561 No person shall allow the construction or operation of any cold cleaning facility for metal degreasing using an organic solvent unless the following requirements are met:

a. A cover or door shall be installed on the facility that can be easily operated with one hand.

b. An internal drain board will be provided in such a manner that will allow lid closure if practical.

c. A permanent, conspicuous label summarizing the operating requirements will be permantly attached to the facility.

d. The operating requirements specified in subsection 15.561c shall as a minimum specify:

  (1) Drain clean parts at last 15 seconds or until dripping ceases before removal.

  (2) Close degreaser cover when not handling parts in cleaner.

  (3) Store waste solvent in covered containers. Do not dispose or allow disposition in such a manner that more than 20 percent by weight can evaporate into the atmosphere.

e. If used, a solvent spray will be of a solid fluid stream (not atomized or spray).

f. If the solvent volatility is greater than 33 mm Hg (0.6 psi) measured at 38 degrees C. (100 degrees F.) one or more of the following control devices will be required:

  (1) Freeboard that gives a free board ratio greater than or equal to 0.7, or

  (2) Water cover and where the solvent is insoluable and heavier than water or such equivalent.

  (3) Other system of equivalent control as approved by the Commissioner.

15.562 No person shall allow the construction or operation of any vapor type metal degreasing using an organic solvent unless the following requirements are met:

a. The facility has a cover or door that can easily be opened and closed without disturbing the vapor zone.

b. The facility will have the following safety switches:

  (1) Condenser flow switch and thermostat or equivalent capable of shutting off the sump heat if condenser coolant is not circulating or coolant exceeds solvent manufacturers recommended temperature level.

(2) Spray safety switch capable of shutting off spray pumps if the vapor level drops in excess of four inches (10 cm).

c. The facility will have one or more of the following control devices/techniques:

(1) Freeboard ratio not less than 0.75, i.e., the ratio of the freeboard to the width of the degreaser.

(2) Refrigerated chiller, i.e., condenser coils in the upper limit of the vapor zone.

(3) Enclosed design, i.e., cover or door is opened only when part is actually entering or exiting the facility, or

(4) A carbon adsorption system with ventilation greater than 50 cfm/sq. ft. of facility surface and exhausting less than 25 ppm average over one adsorption cycle, or

(5) A control system demonstrated to have a control efficiency equal to or greater than any of the above.

d. A permanent conspicuous label summarizing operating procedures will be attached to the facility.

e. The operating requirements referred to in subsection 15.562d shall as a minimum specify:

(1) Keep cover closed at all times except when processing work.

(2) Minimize solvent carry-out by the following measures:

(a) Rack parts to allow full drainage.

(b) Move parts in and out of the degreaser at less than 3.3m/sec. (11 ft./min.).

(c) Degrease the work load in the vapor zone at least 30 sec. or until condensation ceases.

(d) Tip out any pools of solvent on the cleaned parts before removal.

(e) Allow parts to dry within the degreaser for at least 15 sec. or until visually dry.

(3) Do not degrease porous or absorbent materials, such as cloth, leather, wood or rope.

(4) Work loads should not occupy more than half of the degreaser's open top area.

(5) Never spray above the vapor level.

(6) Assure solvent leaks immediately repaired or the degreaser is shut down.

(7) Do not dispose of waste solvent or transfer it to another party in such a manner that greater than 20 percent of the waste (by weight) will evaporate into the atmophere. Store waste solvent only in closed containers.

(8) Exhaust ventilation should not exceed 20 cubic meters/min. per square meter (65 cfm per square foot) of degreaser open area, unless necessary to meet OSHA requirements. Ventilation fans should not be used near the degreaser opening.

(9) Water should not be visually detectable in solvent exiting the water separator.

15.563 No person shall operate a conveyorized degreasing facility unless the following requirements are met:

a. The facility will be operated as follows:

(1) Exhaust ventilation should not exceed 20 cubic meters/min. per square meter (65 cfm per square foot) of degreaser opening, unless necessary to meet OSHA requirements. Work place fans should not be used near the degreaser opening.

b. Minimize carry-out emissions by:

(1) Racking parts for best drainage.

(2) Maintaining vertical conveyor speed at less than 3.3 m/min. (11 ft./min.).

c. Do not dispose of waste solvent or transfer it to another party in such a manner that greater than 20 percent of the waste (by weight) can evaporate into the atmosphere. Store waste solvent only in covered containers.

d. Repair solvent leaks immediately, or shut down the degreaser.

e. Water should not be visibly detectable in the solvent exiting the water separator.

f. A permanent conspicuous label will be attached to the facility summarizing the operating requirements listed in subsections 15.553a through 15.553e.

15.564 As an alternative to the requirements of subsections 15.561, 15.562 and 15.563, other methods of control may be approved by the Commissioner upon application by a source; provided, the applicant can demonstrate to the Commissioner's satisfaction that the proposed method will preclude no less than 80 percent of the emissions from the source or collective sources from being emitted to the atmosphere.

Regulation No. 16

Control of Emission of Sulfur Compounds

16.1 Purpose

The purpose of this regulation is to control emissions of sulfur compounds from stationary sources in order to prevent the Oklahoma air quality standard from being exceeded and insure that degradation of the present level of air quality in Oklahoma does not occur.

16.2 Existing Equipment - Sulfur Oxides Standards

16.21 Standard

No person shall cause, let, suffer, or allow any emission of sulfur dioxide from existing equipment which results in an ambient air concentration of sulfur dioxide at any given point in excess of 1350 ug/M^3 (0.52 ppm) in a five (5) minute period of any hour, a one (1) hour average exposure of 1200 ug/M^3 (0.46 ppm), a three (3) hour average exposure of 650 ug/M^3 (0.25 ppm), or a 24-hour average exposure of 130 ug/M^3 (0.05 ppm) of sulfur dioxide contributed from any one source. These limitations shall not apply to ambient air concentrations occurring on the property from which such emission occurs, providing such property, from the emission point to the point of any such concentration is controlled by the person responsible for such emission.

16.22 Determination of Violation

Violation of Section 16.21 may be determined by the Commissioner by use of appropriate material balances and/or emission factors, and the ambient air concentration may be determined by the use of appropriate atmospheric diffusion estimates or any other suitable method as accepted by the Commissioner. Determinations made by the Commissioner using these procedures indicating that the limits set in Section 16.21 are possible shall constitute prime evidence that it has been violated Source operators may use these same procedures in lieu of ambient air monitoring as proof of compliance with limits set in Section 16.21.

16.23 Method of Compliance

Compliance with the provisions of Section 16.21 and 16.22 may be achieved by compliance with emission limits set in Section 16.3 for new equipment.

16.3 New Equipment - Sulfur Oxides Standards

16.31 Sulfuric Acid Plants

16.311 Emission Limits

A person operating a new sulfuric acid plant shall not cause, suffer, or allow the discharge into the atmosphere of:

1. Sulfur dioxide in the effluent in excess of four (4) pounds per ton of 100 percent sulfuric acid produced (2 kgm per metric ton), maximum two-hour average.
2. Sulfuric acid mist which is in excess of 0.15 pounds per ton of 100 percent sulfuric acid produced (75 grams per metric ton), maximum two-hour average, expressed as H_2SO_4.
3. A visible emission equivalent to an opacity of ¼ Ringelmann or five (5) percent equivalent opacity.

These emission limits shall apply to only those sulfuric acid plants producing sulfuric acid by the contract process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans or acid sludge.

16.312 Emission Monitoring

a. All sulfuric acid plants regulated under this subsection shall have installed, calibrated, maintained and operated, an instrument for continuously monitoring and recording emissions of sulfur dioxide. The instrument installed and used pursuant to this section shall have a confidence level of at least 95 percent and be accurate with ± 20 percent and shall be calibrated in accordance with the method(s) prescribed by the manufacturer(s) of such instrument. The instrument shall be calibrated at least once per year unless the manufacturer(s) specifies or recommends calibration at shorter intervals, in which case such specifications or recommendations shall be followed.

b. The owner or operator of any sulfuric acid plant subject to provisions of this subparagraph shall maintain a file of all measurements required and retain the record of any such measurement for at least one year following the date of such measurement.

16.313 Performance Testing

Testing of new sulfuric acid plants to determine if emission standards set in this regulation are met shall be performed by procedures as given in proposed Code of Federal Regulation 466.65 given in Federal Register, Volume 36, Number 159, August 17, 1971, as finally promulgated.

All tests shall be conducted, supervised or approved by a person qualified by training and/or experience in the field of air pollution control.

16.32 Fuel-burning Equipment

16.321 Emission Limit

a. No person shall cause, suffer or allow the discharge into the atmosphere of sulfur oxides measured as sulfur dioxide from new gas fuel-burning equipment in excess of 0.2 pound per million BTU heat input (0.36 gram per million gram-calories), maximum two-hour average.

b. No person shall cause, suffer or allow the discharge into the atmosphere from new liquid fuel-burning equipment in excess of that shown in the following table on the listed effective date.

Effective Date	Sulfur Oxide Emissions Maximum 2 Hr. Average Lbs/million BTU Input
July 1, 1972	0.8

c. No person shall cause, suffer, or allow the discharge into the atmosphere from new solid fuel-burning equipment in excess of 1.2 pounds per million BTU heat input (2.20 grams per million gram-calories), maximum two-hour average.

d. Where different fuels are burned simultaneously in any combination, the applicable standard shall be determined by proration. Compliance shall be determined using the following formula:

Effective Date	Formula
July 1, 1972	$\frac{y(0.80) + z(1.2)}{y + z}$

Where:

Y is the percent of total heat input derived from liquid fuel and, z is the percent of total heat input derived from solid fuel.

16.322 Emission and Fuel Monitoring

a. There shall be installed, calibrated, maintained, and operated, in any new fuel-burning equipment with a rated heat input of 250 million BTU/hr or more emission monitoring instruments as follows:

1. A photoelectric or other type smoke detector and recorder, except where gaseous fuel is the only fuel burned.

2. An instrument for continuously monitoring and recording sulfur dioxide emissions, except where gaseous fuel containing less than 0.1 percent sulfur is the only fuel burned.

b. An instrument installed and used for monitoring shall have a confidence level of at least 95 percent and be accurate within ±20 percent and shall be calibrated in accordance with the method(s) prescribed by the manufacturer(s) of such instruments; instruments shall be calibrated at least once per year unless the manufacturer(s) specifies or recommends calibration at shorter intervals in which case such specifications or recommendations shall be followed.

c. The sulfur content of solid fuels as burned, shall be determined in accordance with the latest revision to the American Society for Testing Materials Method D271, the sulfur content of liquid fuels, as burned, shall be determined in accordance with the American Society for Testing Materials Methods D129 or D1552. Other methods for determining the sulfur content of solid and liquid fuels may be used as approved by the Commissioner.

d. The owner or operator of any fuel-burning equipment with a rated heat input of 250 million BTU/hr or over shall maintain a file of all measurements required under 16.322 (a), (b), and (c) and shall retain the record of any such measurement(s) for at least one (1) year following the date of such measurements.

16.323 Test Methods and Procedures

Testing of new fuel-combustion equipment to determine if the emission standards set in this regulation are met shall be performed by procedures as given in the proposed Code of Federal Regulation 466.26 in the Federal Register, Volume 36, Number 159, August 17, 1971, as finally promulgated.

All tests shall be conducted, supervised or approved by a person qualified by training and/or experience in the field of air pollution control.

16.33 Sulfur Recovery Plants

16.331 Emission Limit

a. Natural Gas Processing

The emission of sulfur oxides, calculated as sulfur dioxide, from a new natural gas processing sulfur recovery plant shall not be more than 100 pounds per hour, maximum two-hour average but not more than 20 pounds per ton of sulfur processed as a minimum control efficiency.

b. Other Processes

The emission of sulfur oxides, calculated as sulfur dioxide, from a new sulfur recovery plant operating in conjunction with other processes is limited to 20 pounds per ton of sulfur processed, maximum two-hour average.

16.332 Emission Monitoring

a. All new sulfur recovery plants regulated under this subsection shall have calibrated, maintained, and operated an instrument for continuously monitoring and recording emissions of sulfur dioxide. The instrument installed and used pursuant to this section shall have a confidence level of at least 95 percent and be accurate within ±20 percent and shall be calibrated in accordance with the method(s) prescribed by the manufacturer(s) of such instrument, the instrument shall be calibrated at least once per year unless the manufacturer(s) specifies or recommends calibration at shorter intervals, in which case such specifications or recommendations shall be followed.

b. The owner or operator of any sulfur recovery plant subject to provisions of this subparagraph shall maintain a file of all measurements required and retain the record of any such measurement for at least one (1) year following the date of such measurement.

16.333 Performance Testing

Testing of sulfur recovery plants to determine if emission standards set in this regulation are met shall be performed by procedures as accepted by the Commissioner. Promulgated federal testing procedures for similar processes will be considered in making the determination of procedures to be used.

All tests shall be conducted, supervised or approved by a person qualified by training and/or experience in the field of air pollution control.

16.34 Nonferrous Smelters

16.341 Emission Limit

The emission of sulfur oxides, calculated as sulfur dioxide, from new nonferrous smelters is restricted according to the following equations as a maximum two-hour average.

Copper Smelters: $Y = 0.2X$

Zinc Smelters: $Y = 0.564X^{0.85}$

Lead Smelters: $Y = 0.98X^{0.77}$

Where X = Total sulfur fed to smelter (lb/hr)

Y = Sulfur dioxide emissions (lb/hr)

16.342 Emission Monitoring

a. All new nonferrous smelters regulated under this subsection shall have installed, calibrated, maintained, and operated an instrument for continuously monitoring and recording emissions of sulfur dioxide.

b. The owner or operator of any new nonferrous smelter subject to provisions of this subparagraph shall maintain a file of all measurements required and retain the record of any such measurement for at least one (1) year following the date of such measurement.

16.343 Performance Testing

Testing of nonferrous smelter plants to determine if emission standards set in this regulation are met shall be performed by procedures as accepted by the Commissioner. Promulgated federal testing procedures for similar process will be considered in making the determination of procedures to be used.

All tests shall be conducted, supervised or approved by a person qualified by training and/or experience in the field of air pollution control.

16.35 Paper Pulp Mill

16.351 Emission Limit

The emission of sulfur oxides, calculated as sulfur dioxide, from the blow pits, washer vents, storage tanks, digester relief, and recovery furnace of any new paper pulp mill shall not exceed eighteen pounds per air-dried ton of pulp produced, maximum two-hour average.

16.352 Emission Monitoring

a. All new paper pulp mills shall have installed, calibrated, maintained and operated instruments for continuously monitoring and recording emissions of sulfur dioxide from the recovery system gas-cleaning equipment and other locations as required by the Commissioner. The instrument installed and used pursuant to this section shall have a confidence level of at least 95 percent and be accurate within ±20 percent and shall be calibrated in accordance with the method(s) prescribed by the manufacturer(s) of such instrument, the instrument shall be calibrated at least once per year unless the manufacturer(s) specifies or recommends calibration at shorter intervals, in which case such specifications or recommendations shall be followed.

b. The owner or operator of any new paper pulp mill subject to provisions of this subparagraph shall maintain a file of all measurements required and retain the record of any such measurement for at least one year following the date of such measurement.

16.353 Performance Testing

Testing of paper pulp mills to determine if emission standards set in this regulation are met shall be performed by procedures as accepted by the Commissioner. Promulgated federal testing procedures for similar processes will be considered in making the determination of procedures to be used.

All tests shall be conducted, supervised or approved by a person qualified by training and/or experience in the field of air pollution control.

16.5 New Equipment - Hydrogen Sulfide Standards

16.51 Petroleum and Natural Gas Processes

16.511 Emission Limit

a. No person shall cause, suffer, or allow the discharge into the atmosphere of hydrogen sulfide from any new petroleum or natural gas processing equipment without removal of the hydrogen sulfide from the exhaust gas or oxidizing it to sulfur dioxide in a system which insures at all times complete combustion of the hydrogen sulfide, with the exhaust gas then being emitted from a stack at least 50 feet in height. Efficiency of these removal or oxidation systems shall not allow to be emitted more than 0.3 pound per hour of hydrogen sulfide as a two-hour maximum, with a maximum efficiency required of 95 percent of the hydrogen sulfide in the exhaust gas.

b. Direct oxidation of hydrogen sulfide to sulfur oxides without a prior removal step meeting emission limits of 16.331 is not allowed for any system which would allow discharge of more than 100 pounds per hour of sulfur oxides expressed as sulfur dioxide, maximum two-hour average.

16.512 Emission Monitoring

a. All new petroleum and natural gas processing facilities regulated under this subsection shall have installed, calibrated, maintained and operated an alarm system which will signal non-combustion of the gas.

b. The user shall initially demonstrate compliance with the ambient air limit of 16.41 at least twice per year using either dispersion modeling or ambient air measurements. If the calculated or measured values are between 50 and 75 percent of the allowable concentrations compliance shall be demonstrated once every year. If the calculated or measured values are between 25 and 50 percent of the allowable concentrations compliance shall be demonstrated once every 18 months. If the calculated or measured values are equal to or less than 25 percent of the allowable concentration compliance shall be demonstrated once every two (2) years.

c. The owner or operator of any new petroleum or natural gas processing facility subject to provisions of this subparagraph shall maintain a file of all such measurements required and retain the record of all such measurements for at least one (1) year following the date of such measurement.

16.513 Performance Testing

Testing of petroleum and natural gas processing plants to determine if emission standards set in this regulation are met shall be performed by procedures as accepted by the Commissioner. Promulgated federal testing procedures for similar processes will be considered in making the determination of procedures to be used. All tests shall be conducted, supervised or approved by a person qualified by training and/or experience in the field of air pollution control.

Regulation No. 17

Control of Emission of Carbon Monoxide

17.1 Purpose

The purpose of this regulation is to control emissions of carbon monoxide from stationary sources to prevent the Oklahoma air quality standard from being exceeded and insure that the present level of air quality in Oklahoma is not degraded.

17.2 Emission Limits

a. Existing Sources

The emission of carbon monoxide from any existing foundry cupola, blast furnace, basic oxygen furnace, catalytic cracking unit, or other petroleum or natural gas process except stationary engines located in, or significantly impacting (i.e., 500ug/m^3 or an 8 hour average) on a nonattainment area for carbon monoxide shall be reduced by use of complete secondary combustion of the waste gas generated. Removal of 93 percent or more or the carbon monoxide generated shall be considered equivalent to complete secondary combustion. Existing equipment subject to this regulation must meet the emission limitations as expeditiously as practicable, but not later than December 31, 1982.

b. New Sources

The emission of carbon monoxide from any new foundry cupola, blast furnace, basic oxygen furnace, catalytic cracking unit, or other petroleum or natural gas process except stationary engines shall be reduced by use of complete secondary combustion of the waste gas generated. Removal of 93 percent or more of the carbon monoxide generated shall be considered equivalent to secondary combustion.

17.3 Performance Testing

Testing of equipment to determine if emission standards set in this regulation are met shall be performed by procedures as accepted by the Commissioner. Promulgated federal testing procedures for similar processes will be considered in making the determination of procedures to be used.

Regulation No. 18

Control of Emission of Nitrogen Oxides

18.1 Purpose

The purpose of this regulation is to control the emission of nitrogen oxides from stationary sources to prevent the Okalahoma air quality standards from being exceeded and insure that the present level of air quality in Oklahoma is not degraded.

18.2 Emission Limits

18.21 Fuel Combustion

a. No person shall cause, suffer or allow emissions of nitrogen oxides calculated as nitrogen dioxide from any new gas-fired fuel-burning equipment with a rated heat input of 50 million BTU per hour or more, in excess of 0.20 pound per million BTU (0.36 gram per million gram-calorie) heat input, two-hour maximum.

b. No person shall cause, suffer or allow emissions of nitrogen oxides calculated as nitrogen dioxide from any new liquid-fired fuel-burning equipment with a rated heat input of 50 million BTU per hour or more, in excess of 0.30 pound per million BTU (.54 gram per million gram-calorie) heat input, two-hour maximum.

c. No person shall cause, suffer or allow emissions of nitrogen oxides calculated as nitrogen dioxide from any new solid fossil fuel-burning equipment with a rated heat input of 50 million BTU per hour or more, in excess of 0.70 pound per million BTU (1.26 gram per million gram-calorie)heat input, two-hour maximum.

18.22 Nitric Acid Plant

No person shall cause, suffer or allow emissions of nitrogen oxides, calculated as nitrogen dioxide, from new nitric acid plants, in excess of 3.0 pounds per ton (1.5 kg/metric ton) of 100 percent acid produced, two-hour maximum.

No person shall cause, suffer or allow any visible emissions from new nitric acid plants.

18.3 Performance Testing

Testing of equipment to determine if emission standards set in this regulation are met shall be performed by procedures as accepted by the Commissioner. Promulgated federal testing procedures for similar processes will be considered in making the determination of procedures to be used.

CHAPTER 28.

POLLUTION

ARTICLE II. AIR.

OKLAHOMA CITY, OKLAHOMA

ORDINANCE 12575

MARCH 31, 1970

POLLUTION

ARTICLE II. AIR.

Sec. 28-25. Citation.

This Article shall be known and cited as the Air Quality Control Ordinance. (Ord. No. 12,575, March 31, 1970.)

Sec. 28-26. Definitions.

(a) As used herein:

(1) Air contaminant shall mean any smoke, soot, fly ash, dust, cinder, dirt, noxious, obnoxious acids, fumes, oxides, gases, vapors, odors, toxic or radio active substances, waste particulates, solid, liquid, or gaseous matter in the atmosphere which when in sufficient quantities is capable of injuring human, plant or animal life or depriving the enjoyment thereof.

(2) Air Pollution shall mean the emission of any air contaminants in such place or manner which when by itself or combined with other contaminants present in the atmosphere is detrimental to or endangers the health, comfort or safety of any person or which may cause injury or damage to property or premises.

(3) Atmosphere shall mean the air that envelops or surrounds the earth.

(4) Board shall mean the Air Quality Control Variance Board.

(5) Chimney or stack shall mean chimney, stack, conduit, duct, vent, flue, or opening of any kind whatsoever, arranged to conduct any products to the atmosphere.

(6) Combustible materials and fuels shall mean any substance which will readily burn and shall include those substances which, although generally considered non-combustible, are or may be included in the mass of the combustible-material burned or to be burned.

(7) Dense smoke shall mean smoke of a shade or the equivalent opacity of the shade, designated as No. 1 on the Ringelmann Chart or greater.

(8) Director shall mean the Director of the City-County Health Department or his designated employees or representatives.

(9) Emission shall mean the emission of air contaminants into the atmosphere.

(10) Evaporating loss control system shall mean a system or device designed and installed in such a manner as to reduce or prevent the emission to the atmosphere of the vapors of the hydrocarbon fuel contained in the fuel tank, carburetor, or fuel pump of the motor vehicle.

(11) Exhaust emission control system shall mean a system, device or engine modification designed and installed in such a manner as to reduce or prevent the emission to the atmosphere of air pollutant gases, vapors, and particulate matter released from the motor vehicle engine through the exhaust manifold and tailpipe.

(12) Fuel burning equipment shall mean any equipment, machinery, device, structure or contrivance, and all appurtenances thereto, including ducts, breeching, fuel-feeding equipment, ash removal equipment, internal combustion engines, combustion controls, stacks and chimneys, which burn fuel or combustible material for the purpose of producing heat or energy, but shall not mean process equipment of operations of incinerators.

(13) Incinerator shall mean any device, structure or contrivance used to dispose of refuse or other waste by burning or the processing of salvageable material by burning but excluding flares.

(14) Motor vehicle shall mean a self-propelled, wheeled vehicle designed for normal use on public streets and highways.

(15) Motor vehicle pollution control device shall mean any or all of the devices or systems referred to in this section and all designed to control or prevent air pollution emissions from motor vehicles.

(16) Multiple chamber incinerator shall mean any incinerator consisting of two or more combustion chambers of in line or retort type physically separated by curtained walls with gas passage ports or ducts and designed for maximum combustion of the material to be burned.

(17) Open burning shall mean the burning of combustible materials or refuse in such a manner that the products of combustion are emitted directly into the atmosphere.

(18) Open-pit incinerator shall mean a device consisting of a pit (into which the material to be burned is placed) nozzles, pipes, and other appurtenances designed and arranged in a manner to deliver additional air and or auxiliary fuel to, or near, the zone of combustion so that theoretically complete combustion is accomplished or approached.

(19) Particulate matter shall mean discrete particles of liquid (except uncombined water) or solid matter or both which may or may not be suspended in air.

(20) Positive crankcase ventilator shall mean a system or device designed and installed in such a manner as to prevent or reduce the release or emission into the atmosphere of gases or vapors produced or otherwise present in the crankcase of the engine of a motor vehicle.

(21) Process equipment or operation shall mean any equipment machinery, device or premises used for the treating, processing or manufacuring of materials, products or substances which operation may emit smoke, particulate matter or other air contaminants.

(22) Process weight shall mean the total weight of all materials introduced into any specific process equipment or operation. Solid fuels shall be considered as part of the process weight but liquids and gases used solely as fuel shall not.

(23) Process weight per hour shall mean the weight derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof excluding any time during which the equipment is idle.

(24) Products of combustion shall mean all particulate matter and other air contaminants emitted as a result of the burning of refuse and combustible materials.

(25) Proprietary information shall mean any information obtained pursuant to this ordinance which relates to sales figures or to production processes unique to the owner or operator or which affect the competitive position of such owner or operator.

(26) Refuse shall mean garbage, rubbish, trade waste, leaves, salvageable material, agricultural waste and other wastes.

(27) Ringelmann chart shall mean the chart for grading the appearance, density, shade or opacity of smoke, as published with instructions for use by the United States Bureau of Mines, in Information Circular 7718, dated August, 1955.

(28) Smoke shall mean small gasborne or airborne particles resulting from combustion operations and consisting of carbon, ash, and other matter that is present in sufficient quantitiy to be observable.

(29) Source any physical arrangement or structure which may emit air contaminants. It includes, but is not limited to, stacks, chimneys, building openings, open fires, vehicles, process, equipment, structures and premises.

(30) Source gas volume shall mean the total amount of gas including contaminants, emitted from any process, equipment or operation into the atmosphere.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-27. Notice of changes.

The City Council shall not enact or amend any ordinance rule or regulation concerning air quality control without first holding a public hearing and giving not less than ten (10) days notice of the time and place of such hearing by publication in a newspaper of general circulation published within the City. (Ord. No. 12,575, March 31, 1970.)

Sec. 28-28. Enforcement.

The Director shall enforce the provisions of this Article. (Ord. No. 12,575, March 31, 1970.)

Sec. 28-29. Abatement procedure.

In addition to any penalties, upon determination by the Director that a violation of this Article has occurred and that the person in violation has not furnished satisfactory proof that corrective measures have been or are being taken to abate the nuisance, the Director shall give written notice to the person in violation, to abate the nuisance. The notice shall specify the section which is being violated and a reasonable time not exceeding twenty (20) days within which to abate the nuisance.

If at the end of the time allowed the violation has not been corrected, the Director shall abate the nuisance as provided by law.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-30. Emergency.

When a violation of this Article creates a hazardous or dangerous condition capable of immediately harming life or property the Director shall summarily abate the nuisance immediately and without notice.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-31. Tests, data sampling.

Upon written notice, the Director may require from any person subject to this Article data to establish the nature, extent, quantity, or degree of air contaminants which are or may be discharged by a source under such person's control, and may require that such data be certified by a professional engineer registered in the State. The Director may, at his expense, designate an agent to independently gather data as to the nature, extent, quantity and degree of any air contaminants which are or may be discharged from the source. Subject to the confidentiality requirements of Section 28-36 an agent so designated is authorized to inspect any facilities and equipment necessary to gather the data. The owners of the premises being inspected will make the same available to inspection and shall permit the Director to install and maintain sampling and testing apparatus as are reasonable and necessary for measurement of emissions of air contaminants, provided that they shall not unduly interfere with the operations of the owner. The Director may in writing require the owner to provide, and maintain means of access to locations for sampling and testing purposes, in order to secure data that will disclose the nature, extent, quantity, or degree of air contaminants discharged into the atmosphere.

Sec. 28-32 Variances.

Variances form the strict provisions of this Article may be granted by the Board pursuant to applications therfore when:

(a) Due to conditions beyond the control of the person in violation, and which are not self imposed, compliance with this Article will result in an arbitrary and unreasonable taking of property or the practical closing and elimination of any lawful business, occupation or activity; and

(b) There are not sufficient corresponding benefits or advantages to the public in the reduction of air pollution.

Variances shall be for a specific time but not to exceed one (1) year. Upon expiration of a variance, additional variances may be granted.

A variance granted shall be personal to the applicant and not transferrable. All variances granted are subject to review and revocation by the Board. (Ord. No. 12,575, March 31, 1970.)

Sec. 28-33. Air Quality Control Variance Board.

(a) Created. There is hereby created an Air Quality Control Variance Board which shall consist of seven (7) members to be appointed by the Mayor with the consent and approval of the Council.

(b) Membership. The members shall be residents of the City and shall not be employees of the Federal, State or Municipal Government. Of the members:

(1) One (1) shall be representative of the engineering profession, and as such shall be a professional engineer and experienced in the matters of air pollution equipment and control;

(2) One (1) member shall be representative of industry in general and as such shall be employed as a manufacturing executive carrying on a manufacturing business within the City;

(3) One (1) member shall be experienced in matters of scientific knowledge and competent in matters of air pollution control and evaluation;

(4) One (1) member shall be representative of the petroleum industry and shall be trained and experienced in matters of scientific knowledge of causes as well as effects of air pollution; and

(5) One (1) member shall be representative of agriculture, and, as such, shall be engaged in or employed by a basic agricultural business or the processing of agricultural products.

(c) Terms of office. The members of the Variance Board shall serve for a term of three (3) years or until their successors are appointed, provided that of the first seven (7) members appointed two (2) shall serve for a term of two (2) years and two (2) shall serve for a term of one (1) year. The terms shall expire on June 30 in the year which the term would expire regardless of the date of appointment. Members may be removed for cause. A member appointed to fill a vacancy shall serve the remainder of the unexpired term.

(d) Powers and duties. The members of the Board shall have the power to subpoena witnesses, require the production of records, documents and other matter and administer oaths.

Four (4) members shall constitute a quorum provided that no variance shall be granted or revoked without the concurrence of at least four (4) members.

The Board shall select from its number a Chairman who shall serve for a period of one (1) year.

The meetings and hearings of the Board shall be called by the Chairman.

The members shall be given five (5) days notice prior to any meeting or hearing. Emergency meetings or hearing may be held provided all members consent to such meeting in writing.

The Board shall make other rules and regulations concerning the procedure in granting or revoking variances as it shall deem necessary.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-34. Application for variance.

Any person may make an application for a variance from the terms of this Article by paying the required fee and by filing a written application with the Director. The application form shall be verified by the applicant and set forth all information required by the Board including the full name and address of the applicant, the nature of the violation and the extent to which a variance is sought.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-35. Public hearings.

No variance shall be granted or revoked without first holding a public hearing. Not less than ten (10) days notice shall be given to all interested persons as appear in the files and records of the Board. In addition, notice of such hearing shall be published in a newspaper of general circulation and published within the City not less than ten (10) days prior to the date of hearing.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-36. Proprietary information.

No person shall disclose to anyone other than the Director, the Board or a court of competent jurisdiction, any information furnished or obtained pursuant to this Article.

Upon request of the interest party, all hearings or trails in which proprietary information is to be divulged shall be held "in camera" and such information shall be sealed and access otherwise limited.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-37. Notice.

All notice required under this Article, unless otherwise specified shall be in writing and shall be served upon the person being given notice personally or mailed to his last known address, postage prepaid. The date of mailing shall be considered as the date such notice is given.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-38. Fees.

Any applicant for variance shall pay a fee to the City Clerk in the amount of Fifty ($50.00) Dollars. Such fee shall be paid each time a variance is sought provided that the Board may in its discretion review any variance denied within ninety (90) days from the date of such denial without additional cost to the applicant.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-39. Nuisance declared.

The emission of air contaminants in violation of this Article is declared to be a public nuisance and may be abated by the Director as provided by law.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-40. Liability.

Any person owning, operating or controlling a source of air contaminants which violates this Article shall be subject to all penalties and liabilities for such violation. Each day of any such violation shall constitute a separate offense.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-41. Air pollution prohibited.

No person shall permit or cause air pollution.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-42. Emission of dense smoke prohibited.

No person shall cause or permit the emission of dense smoke from any source whatever except as specifically permitted.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-43. Incinerators.

(a) Permit required. No person shall install or make any alteration or modification to an incinerator which affects the emission of air contaminants without first having obtained a permit from the Director and paying the fee therefor as provided for in the General Schedule of fees in Chapter 20.

(b) Application. A person making application for a permit shall furnish such information concerning the incinerator as the Director may request including the plans, specifications, maufacturer's descriptive literature and test reports.

(c) Specifications. All incinerators installed after the effective date of this Article shall be multiple chambered, gas fired in the primary and secondary chamber, and water scrubbed. All incinerators shall have a capacity of seventy five (75) pounds per hour or greater provided that this capacity shall not be applicable to incinerators designed and used exclusively as pathological incinerators.

An incinerator of different construction may be used when the Director determines that the incinerator will be equally effective in controlling the emission of air contaminants and approves its installation.

(d) Operation. All incinerators shall be maintained and operated according to good practices.

(e) Emission of particulate matter. Incinerators with a maximum burning capacity of two hundred (200) pounds per hour or more shall not emit particulate matter in excess of 0.2 grains per dry cubic foot corrected to twelve (12%) per cent CO2 of exhaust gas under standard conditions. Incinerators with a maximum burning capacity of less than two hundred (200) pounds per hours or more shall not emit particulate matter in excess of 0.3 grains per dry cubic foot corrected to twelve (12%) percent CO2 of exhaust gas under standard conditions.

(f) Existing incinerators, exceptions. Within twelve (12) months after the effective date of this Article all existing incinerators shall comply with all provisions of this Article except Subsection (c) of this Section.

(g) Dense smoke, exception. Incinerators may emit dense smoke not exceeding a shade or the equivalent opacity of the shade designated as No. 2 on the Ringelmann Chart for periods not exceeding five (5) minutes in any sixty (60) minute period and not exceeding twenty (20) minutes in any twenty four (24) hour period.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-44. Fuel burning equipment.

(a) Emission of particulate matter prohibited. Fuel burning equipment shall not emit particulate matter in excess of that indicated on Table 1 or Chart 1.

(b) Existing fuel burning equipment, exception. Fuel burning equipment in operation prior to the effective date of this Article shall not emit particulate matter in excess of 0.6 pounds per million BTU heat input provided that all such existing fuel burning equipment shall comply with all the provisions of this Article within twelve (12) months after it becomes effective.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-45. Process equipment or operations.

(a) Particulate matter emission. Process equipment or operation installed or commenced after effective date of this Article shall not emit from the premises upon which such equipment or operation is located, particulate matter in excess of that indicated on either Table 2, Table 3 or Chart 2. Existing process equipment or operations shall have twelve (12) months from effective date of this Article to comply with this Sub-section.

(b) Dust control. The owner or operator of any process equipment or operation shall maintain dust control of the plant premises and plant owned, leased or controlled access roads by paving, oil treatment, or other suitable measures. Good operating practices shall be observed in relation to stockpiling, screen changing, and general maintenance to prevent dust generation and atmospheric entertainment. Good operating practices, including water spraying or other suitable measures, shall be employed to minimize dust generation and emission when bins are pulled.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-46. Hot mix asphalt plants.

(a) Particulate matter emission. Hot mix asphalt plants installed or commenced after effective date of this Article shall not emit particulate matter into the atmosphere in excess of the quantity set out in Table 4. Existing hot mix asphalt plants shall not emit particulate matter into the atmophere in excess of the quantity emitted at plants exhibiting good operation and economic control. Within one (1) year all hot mix asphalt plants shall comply with the emission rate shown on Table 4 or a new rate to be determined by testing and experience.

(b) Dense smoke, exception. Hot mix asphalt plants may emit dense smoke not exceeding a shade or the equivalent opacity of the shade designated as No. 3 on the Ringelmann Chart, for periods not exceeding four (4) minutes in any sixty (60) minute period.

(c) Fugitive dust control system. No hot mix asphalt plant shall be operated unless it is equipped with a fugitive dust control system for the hot aggregate which prevents the emission of particulate matter from any point other than the chimney.
(Ord. No. 12,575, March 31, 1970.)

Sec. 23-47. Open burning prohibited.

No person shall cause or permit an open burning of any public or private place outside any building, provided that open burning may be conducted if no public nuisance is or will be created as follows:

(a) Fires purposely set for the instruction and training of fire fighting personnel when authorized by the Fire Chief.

(b) Fires set for the elimination of fire hazards or hazardous material where there is no other practical or lawful method of disposal, and such burning is authorized by the Fire Chief and Director.

(c) Camp fires and other fires used solely for recreational or ceremonial purposes, or for out-door non-commercial preparation of food.

(d) Fires purposely set for the management of forest or game in accordance with practices recommended by the Oklahoma Department of Agriculture, the United States Forest Service and which are authorized by the Fire Chief.

(e) The burning of refuse and other combustible materials generated in the operation of a domestic household when no regular garbage service is available.

(f) The burning of combustible material in an open pit incinerator which is defined and operated for the control of smoke and particulate matter.

(g) The burning of hydrocarbons by atmospheric flares when no other means of disposal is practical.

(h) The burning of trees, brush, grass, and other vegetable matter for the purpose of clearing land, and (agricultural crop burning) when:

(1) The burning is not within one hundred fifty (150') feet of an occupied residence or structure other than those located on property where the burning is conducted.

(2) Care is used to minimize the amount of dirt on the material being burned.

(3) Oils, rubber and other similar materials which produce unreasonable amounts of air contaminants and smoke are burned.

(4) The burning occurs between three (3) hours after sunrise and three (3) hours before sunset.

(5) No traffic hazard is created.
(Ord. No. 12,575, March 31, 1970.)

Sec. 28-48. Motor vehicle pollution control devices.

(a) Scope. This Section shall apply to all motor vehicles registered or subject to registration with the Oklahoma State Tax Commission in which as new vehicles, motor vehicle pollution control devices have been installed by virtue of Federal laws and regulations, in effect now and hereafter, requiring such devices to be installed. However, nothing in this Article shall supersede or otherwise modify such Federal laws and regulations, nor shall anything in this

Article be construed to require the installation of motor vehicle pollution control devices on motor vehicles not referred to by such Federal laws and regulations.

(b) Prohibited Acts. No person shall cause, suffer, allow or permit the removal, disconnection or disabling of a motor vehicle pollution control device which is on a motor vehicle.

(c) Use or liquified petroleum gas. Operation of a motor vehicle or its engine which uses liquified petroleum gas as fuel is hereby exempted from provisions of this Article.
(Ord. No. 12,575, March 31, 1970.)

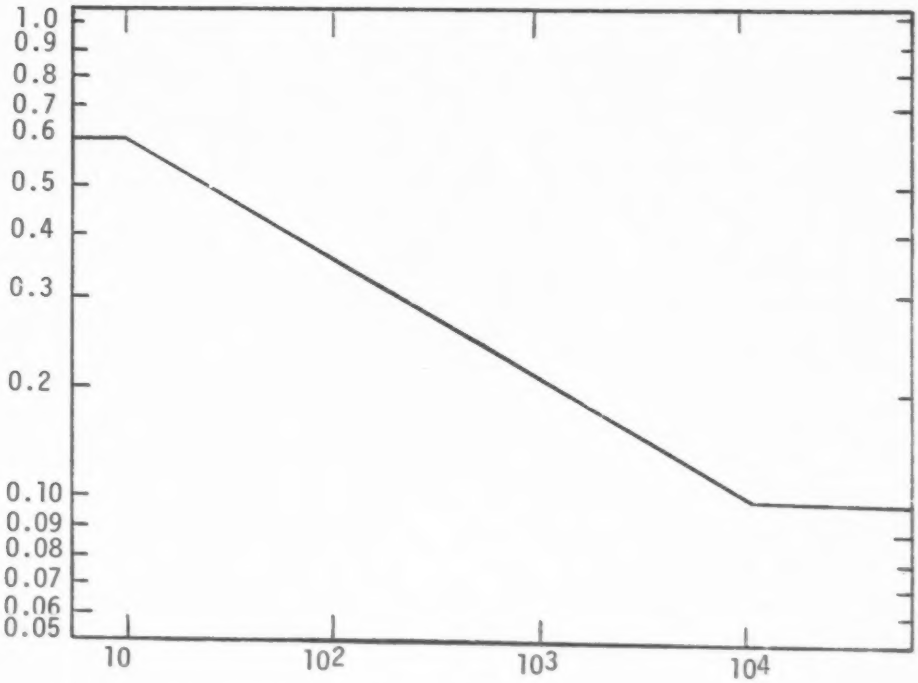
Sec. 28-49. Tables and Charts.

Fuel Burning Equipment
Table 1

Heat Input in Million British Thermal Units per Hour Up to and including 10	Maximum Allowable Emissions of Particulate Matter in Pounds per Million British Thermal Units
100	0.60
1,000	0.35
10,000 and above	0.20
	0.10

Chart 1

Particulate Matter Emission Limits for Fuel-Burning Equipment



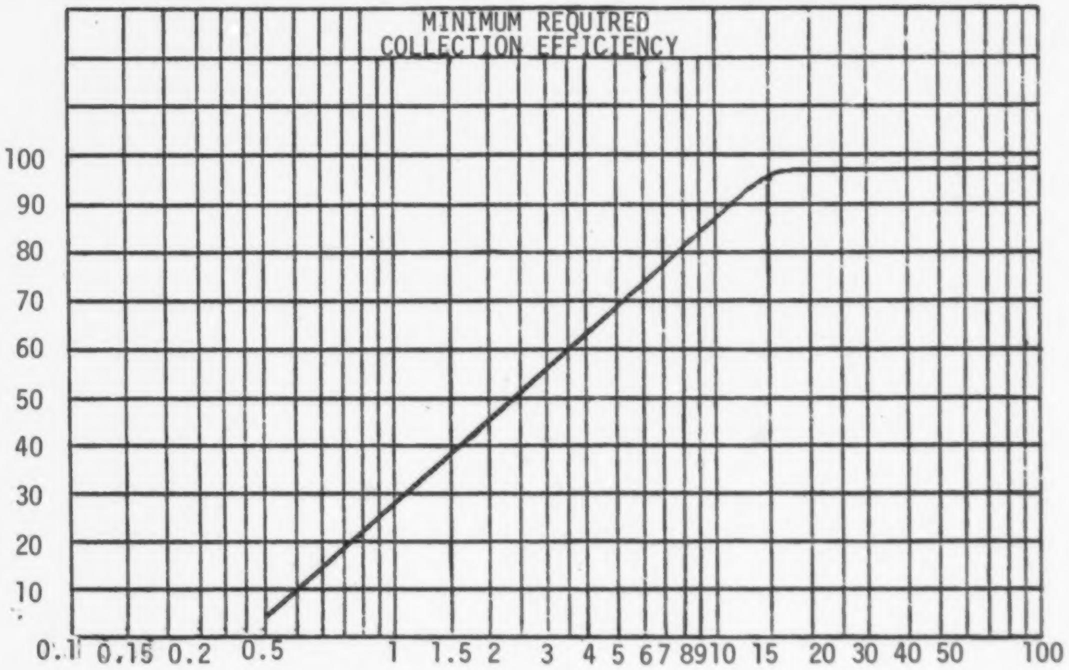
EQUIPMENT CAPACITY RATING, 10^6 BTU/HR

ALLOWABLE EMISSION, LB/10^6 BTU

OKLAHOMA CITY CODE

Chart 2

COLLECTION EFFICIENCY BASED ON PARTICLE SIZE



COLLECTION EFFICIENCY (% BY WEIGHT)

PROCESS EQUIPMENT OR OPERATIONS
Table 2
ALLOWABLE RATE OF PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE

Process Weight Rate		lb./hr.
lb./hr.	tons/hr.	Rate of Emission
100	0.05	0.551
200	0.10	0.877
400	0.20	1.40
600	0.30	1.83
800	0.40	2.22
1,000	0.50	2.58
1,500	0.75	3.38
2,000	1.00	4.10
2,500	1.25	4.76
3,000	1.50	5.38
3,500	1.75	5.96
4,000	2.00	6.52
5,000	2.50	7.58
6,000	3.00	8.56
7,000	3.50	9.49
8,000	4.00	10.4
9,000	4.50	11.2
10,000	5.00	12.0
12,000	6.00	13.6
16,000	8	16.5
18,000	9	17.9
20,000	10	19.2
30,000	15	25.2
40,000	20	30.5
50,000	25	35.4
60,000	30	40.0
70,000	35	41.3
80,000	40	42.5
90,000	45	43.6
100,000	50	44.6
120,000	60	46.3
140,000	70	47.8
160,000	80	49.0
200,000	100	51.2
1,000,000	500	69.0
2.000,000	1,000	77.6
6,000,000	3,000	92.7

Interpolation of the data in this table for process weight rates up to 60,000 lb.hr. shall be accomplished by the use equation E equal 4.10 P0.67, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb./hr shall be accomplished by use of the equation E equal 55.0 P0.11-40, where E equal rate of emission in lb./hr. and P equal process weight rate in tons/hr.

Utilization of this table is accomplished by first determining the process rate in lb./hr. or tons/hr. and then reading the allowable rate of emission in lb./hr. horizontally to the right.

Table 3
ALLOWABLE RATE OF PARTICULATE MATTER OF EMISSION BASED ON VOLUME PER SCFM

Source Gas Volume, SCFM	Concentration GR/SCF
7,000 or less	0.100
8,000	0.096
9,000	0.092
10,000	0.089
20,000	0.071
30,000	0.062
40,000	0.057
50,000	0.053
60,000	0.050
80,000	0.045
100,000	0.042
120,000	0.040
140,000	0.038
160,000	0.036
180,000	0.035
200,000	0.034
300,000	0.030
400,000	0.027
500,000	0.025
600,000	0.024
800,000	0.021
1,000,000 or more	0.020

Interpolation of the data in this table shall be accomplished by the use of the equation C equal 1.78S minus 0.325 where S equals source gas volume. SCFM and C equals concentration in grains per SCF.(GR equal Grains)

Utilization of this table is accomplished by first determining the source gas volume in SCFM and then reading the allowable concentration in GR/SCF horizontally to the right.

HOT ASPHALT MIX PLANTS
Table 4

Aggregate Process Weight Per Hour Pounds	Particulate Matter Emission Rate Per Hour
10,000	10
20,000	16
30,000	22
40,000	28
50,000	31
100,000	33
200,000	37
300,000	40
400,000	43
500,000	47
600,000	50

For a process weight between any two (2) consecutive process weight stated in this table, the emission limitation shall be determined by interpolation.
(Ord. No. 12,575, March 31, 1970.)

Appendix G.

TULSA CHARTER

AND

REVISED ORDINANCES

TITLE 17

SECTION 137. DEFINITIONS.

For the purpose of this Clean Air Ordinance, the following terms, phrases and words have the meanings given herein.

A. Person. Means an individual or partnership, corporation, association, firm, company, organization, local or state governmental agency, or any other legal entity, or their representative, officer, agent or assigns.

B. Director of Health. Means the Medical Director of the Tulsa City - County Health Department, or his duly authorized representative.

C. Air Contaminant. Means any particular matter or any gas or combination therof including but not limited to the following: dust, soot, mist, smoke, fumes, fly ash, vapor, corrosive gas, or other discharge and any other airborne material or substance that is offensive, nauseous, irritating or noxious to humans or other animal life, other than water vapor or natural air.

D. Board. Means the Tulsa City-County Board of Health.

E. Council. Means the Clean Air Advisory Council.

F. Review Board. Means the Clean Air Review Board.

SPACES → G. Department. Means the Tulsa City - County Health Department.

SECTION 138. TECHNICAL ADVISORY COUNCIL.

There is hereby created a Technical Advisory Council act in an advisory capacity to the Board in the development, formulation, alteration and administration of rules, regulations and standards for the control and abatement of air contaminants. All members shall serve without compensation.

SECTION 139. ZONING AND PLANNING.

The Director of Health shall gather and supply the Tulsa Metropolitan Area Planning Commission facts concerning air pollution in Tulsa City-County, pertaining to zoning and planning, as requested by the Planning Commission or deemed pertinent by the Director of Health. Notice of all proposed zoning changes shall be given to the Director of Health by the Tulsa Metropolitan Area Planning Commission at least ten (10) days prior to any public hearing or planning commission meeting in which a change is to be considered.

SECTION 140. BUILDING PERMITS

The Building Inspector's Office shall not issue a permit for occupancy, erection, construction, reconstruction, alteration or any commercial, industrial or apartment house structure as defined in Title 42, Section 1 et seq., of the Tulsa Revised Ordinances when the plans and specifications for such structure or occupancy include any fuel-burning equipment, or any chimney or smoke stack until such plans and specifications have been submitted to the Director of Health for approval. Use of AGA approved equipment for heating or cooling shall be deemed to comply with provisions of this Section. No building permit shall be issued if the Director of Health finds that emissions from the building structure will violate the provisions of this Ordinance. Failure of the Director of Health to approve or reject such plans or specifications within ten (10) days shall be deemed approval.

(50.7) SECTION 141. NUISANCE.

No person shall cause or allow the discharge, emission or release into the atmosphere from any source whatsoever of such quantities of air contaminant or other material as may cause injury, endanger health, damage property, or affect public health, well being or safety. Such quantities shall be deemed a public nuisance and subject to penalty as hereinafter provided.

(2.0) SECTION 142. LISTING OF DEVICES AND EQUIPMENT.

Upon written request of the Director of Health, all persons constructing or operating any article, machine, device, equipment or other contrivance of facility capable of causing or permitting emission of air contaminants into the atmosphere shall list equipment set out above with the Director of Health. Such list shall include information as to the ownership, location, design, construction, installation, operation, alteration of any article, machine, device, equipment, contrivance or facility and information concerning the general composition and such other pertinent information deemed necessary by the Director of Health.

(9.0) SECTION 143. INSPECTION.

The Director of Health after proper identification may enter and inspect any building premise, premises or other place for the purpose of determining compliance with the Clean Air Ordinance.

(2.0) SECTION 144. RULES AND REGULATIONS.

The Board may prepare standards, rules and regulations which they deem necessary to protect the public health and safety and to carry out the requirements of the Clean Air Ordinance after due consideration of the recommendations and advice of the Council. Such standards, rules and regulations shall be recommended to the City Commission and the County Commission for their adoption.

(51.13) SECTION 145. CONTROL OF OPEN BURNING.

A. Purpose. It is the purpose of this regulation to establish controls in the open-burning of combustible material to prevent undesirable levels of air contaminants in the atmosphere.

B. Definitions. The section on definitions in the City of Tulsa Clean Air Ordinance (No. 10819) and the County of Tulsa Clean Air Rules and Regulations applies to this regulation. The additional terms defined in this section have the meanings given them herein when used in this regulation.

1. Open-Burning. The burning of any matter in such manner that the products of combustion resulting from the burning are emitted directly into the open atmosphere.

2. Refuse. Any combustible waste material other than liquids or gases.

3. Trade Waste. Solid, liquid or gaseous material resulting from construction; the prosecution of any business, trade or industry; or any demolition operation, including but not limited to, plastics, cartons, grease, oil, chemicals and cinders.

4. Salvage Operation. Any business, trade, industry or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material such as metals or chemicals.

C. Open-Burning Restrictions.

No person shall dispose of refuse or trade waste by open-burning, or cause or permit such disposal except as provided below.

D. Exceptions to Restrictions Against Open-Burning.

1. In areas where no public or commercial refuse collection service is available by the effective date of this regulation, the open-burning of refuse on residential premises or of refuse originating in dwelling units on the same premises shall not be in violation of this regulation until such refuse collection service becomes available or until 3 years from the effective date of this regulation, whichever is sooner.

2. Regardless of provisions of Section C and Sub-Section D-1 of this regulation, open-burning of refuse on residential premises or refuse originating in dwelling units on the same premises shall not be a violation of this regulation in areas of low population density. The Director of Health, after consultation with public agencies concerned with refuse collection and disposal, shall select and publish the specific boundaries of areas in which such open-burning of refuse will not be in violation of this regulation. In selecting such areas, he shall use a density of one dwelling unit per 10 acres as an approximate definition of areas of low population density. The Director of Health shall select and publish revised boundaries, as described above, from time to time as population density changes.

3. Outdoor burning in connection with the preparation of food.

4. Campfires and fires used solely for recreational purposes or for ceremonial occasions.

5. Fires purposely set for purposes of training public or private fire-fighting personnel when authorized by the appropriate governmental entity.

6. Fires set or required by a public officer for the abatement of nuisances and which are necessary and unavoidable in carrying out public health and safety functions.

7. Any open-burning of refuse permitted by Subsection D-1, D-2 and D-6 of this regulation shall be permitted only between the hours of 6:00 A.M. and 10:00 A.M.

E. Prohibition of Salvage Operations by Open-Burning. No person shall conduct or cause or permit the conduct of a salvage operation by open-burning.

F. Exceptions to Regulations on Open-Burning of Trade Wastes.

1. The open-burning of trade wastes may be permitted when it can be shown that such open-burning is necessary and in the public interest. Any person intending to engage in open-burning of trade wastes shall file a request to do so with the Director of Health. The application shall state the following:

a. The name, address and telephone number of the person who submitted the application.

b. The type of business or activity involved.

c. A description of the proposed equipment and operating practices: the type, quantity and composition of trade wastes to be burned.

d. The schedule of burning operations.

e. The exact location where open-burning will be used to dispose of trade waste.

f. Reasons why no method other than open-burning can be used for disposal of trade waste.

g. Evidence that the proposed open-burning has been approved by any fire department which may have jurisdiction.

h. Upon approval of the application by the Director of Health, the person may proceed with the operation without being in violation of Section C.

G. Restrictions on Open-Burning of Agriculutural Wastes.

1. The open-burning of plant life is prohibited provided that the open-burning of plant life grown on the premises in the course of any agricultural operation may be permitted when it can be shown that such open-burning is necessary and that no fire-hazard will occur.

Any person intending to dispose of plant life by open-burning shall file a request to do so with the Director of Health on forms provided by him. Such form may require the provision of such information as the Director of Health may reasonably need to determine the air pollution aspects of the situation and whether the request should be granted. The applicant shall furnish the Director of Health evidence that the proposed open-burning has been approved by any fire department which may have jurisdiction. Upon approval of the application by the Director of Health the person may proceed with the operations without being in violation of this Section G-1.

2. Any open-burning permitted under provisions of Subsection G-1 of this regulation shall be permitted only between the hours of 6:00 A.M. and 10:00 A.M.

SECTION 146. INCINERATORS.

A. Purpose. It is the purpose of this regulation to establish controls for the construction and operation of incinerators to prevent desirable levels of air contaminants in the atmosphere, while maintaining compliance with the existing Fire Prevention Code (Title 14 the Charter and Revised Ordinances of the City of Tulsa, Oklahoma).

B. Definitions. The section on definitions in the City of Tulsa Clean Air Ordinance (No. 10819) and the County of Tulsa Clean Air Rules and Regulations applies to this regulation. The additional terms defined in this section have the meanings given them herein when used in this regulation.

1. Incinerator. Any device, structure or contrivance intended or used to dispose of refuse of other wastes by burning and the processing of salvable material by burning.

2. Refuse. Notwithstanding definitions in other regulations, as used in this regulation, the word refuse includes garbage, rubbish, trade wastes, leaves, salvable material, agricultural wastes and other wastes.

3. Multiple Chamber Incinerator. Any incinerator consisting of two or more refractory-lined combustion chambers in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and adequately designed for maximum combustion of the material to be burned.

C. Provisions Applicable to All Incinerators. After the effective date of this regulation all incinerators shall meet the following provisions:

1. No incinerator shall emit into the atmosphere any air contaminant in quantities detrimental to health or property, or adversely affecting the use or enjoyment of property.

2. Two copies of plans and specifications or manufacturers' descriptive literature, or both if available, shall be filed with the

Director of Health thirty (30) days prior to the installation, construction, reconstruction or alteration of any incinerator. The material so filed shall show the general location, design, capacity, amount and type of waste to be incinerated, fire chamber details, stack or chimney details and location with reference to neighboring properties.

3. All new incinerators shall be multiple-chamber incinerators, provided that the Director of Health may approve any other kind of incinerator if he finds in advance of construction or installation that such other kind of incinerator is equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

D. Restrictions on Emission Color.

1. Emissions from new incinerators shall not be:

a. Of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or

b. Of such capacity as to obscure an observer's view to a degree equal to or greater than No. 1 on the Ringelmann Chart except that air contaminants of a shade or opacity not greater than that designated as No. 2 on the Ringelmann Chart may be emitted for aggregate periods not to exceed six (6) minutes, in any sixty (60) minutes; the shade or opacity of air contaminants shall be measured at its point of emission.

2. Emissions from Existing Incinerators shall not be:

a. Of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart, or

b. Of such opacity as to obscure an observer's view to a degree equal to or greater than No. 2 on the Ringelmann Chart, exclusive of water vapor.

E. Method of Measurement. The Ringelmann Chart published and described in the U.S. Bureau of Mines Information Circular 7718 of the U.S. Federal Register, Title 42, Chapter 1, Sub-chapter F shall be used in grading the shade or opacity of visible air contaminant emissions. The Director of Health may specify other means of measurement which give comparable results or results of greater accuracy. The two publications described in this subsection are hereby made a part of this regulation by reference.

F. Time Limit for Compliance of Existing Incinerators. All existing incinerators shall meet all of the provisions of Section C within 18 months after the effective date of this regulation. (Ord. No. 11224).

G. Restrictions on Particulate Matter Emission from Incinerators. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere:

1. From any incinerator burning less than 200 pounds of refuse per hour, particulate matter to exceed 0.3 grains per standard cubic foot of dry flue gas, adjusted to 12% carbon dioxide and calculated as if no auxiliary fuel had been used.

2. From any incinerator burning 200 or more pounds of refuse per hour, particulate matter to exceed 0.2 grains per standard cubic foot of dry flue gas, adjusted to 12% carbon dioxide and calculated as if no auxiliary fuel had been used.

SECTION 147. CONTROL OF AIR POLLUTION FROM SMOKE AND PARTICULATE MATTER.

A. Purpose. It is the purpose of this regulation to establish air standards for the City of Tulsa, Oklahoma, and the County of Tulsa, Oklahoma, in order to define and prevent undesirable levels of smoke and particulate matter.

B. Definitions.

1. The section of definitions in the City of Tulsa Clean Air Ordinance (No. 10819) applies to this regulation. The additional terms defined in this section have the meanings given to them herein when used in this regulation.

2. Particulate Matter. Any material, except uncombined water, that exists in finely divided form as a liquid or solid. The term "suspended particulate matter" is used to distinguish such liquid or solid matter from material which settles rapidly due to gravity.

3. Smoke. Small gas-borne particles resulting from incomplete combustion, consisting predominantly of carbon and other combustible materials, and present in sufficient quantity to be observable.

4. Equivalent Opacity. The degree to which an emission, other than gray or black smoke, obscures the view of an observer, expressed as an equivalent of the obstruction caused by a gray or black smoke emission of a given density, as measured by a Ringelmann Smoke Chart.

5. Emergency. Any departure from normal operations resulting in the temporary emission of smoke and/or particulate matter above the specified standards.

C. Control of Smoke.

1. Emissions from New Installations. After the effective date of this regulation, the emission of smoke from any new combustion unit or from any type of burning in a combustion unit including the incineration of industrial, commercial and municipal wastes, shall not be of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Smoke Chart, except that smoke emitted during the cleaning of a fire box or the building of a new fire, sootblowing, equipment changes, ash removal and rapping of precipitators

may be as dark or darker than No.1 on the Ringelmann Smoke Chart for a period or periods aggregating not more than six (6) minutes in any sixty (60) consecutive minutes.

2. Emission from Existing Installations.

a. All existing installations shall meet the provisions of Section C.1 within twelve (12) months after the effective date of this regulation.

b. The emission of smoke from any existing combustion unit or from any type of burning in a combustion unit, including the incineration of industrial, commercial and municipal wastes, shall be controlled so that the shade or appearance of the emission is not dark as nor darker than No. 2 on the Ringelmann Smoke Chart, except that smoke emitted during the cleaning of a fire box of the building of a new fire, sootblowing, equipment changes, ash removal and rapping of precipitators may be as dark as or darker than No. 2 on the Ringelmann Smoke Chart for a period or periods aggregating not more than (6) minutes in any sixty (60) consecutive minutes.

3. Emissions from Safety Flares and Other Similar Devices. Within twelve (12) months after the effective date of this regulation, all safety flares and other similar devices used for burning in connection with pressure valve releases and for control over process upsets shall be equipped with air pollution control equipment so as to reduce the smoke emissions so that the shade or appearance of the emission is not as dark as nor darker than No. 1 on the Ringelmann Smoke Chart for more than an aggregate time of six (6) hours in any 10-day period, except for temporary emission during periods of start-up and shut-down of continuous process units. The temporary emission shall not occur for more than six (6) hours out of any twenty-four (24) consecutive hours.

4. Method of Measurement. The Ringelmann Chart published and described in the U.S. Bureau of Mines Information Circular 7718 or in the U.S. Public Health Service Smoke Inspection Guide as described in the Federal Register, Title 42, Chapter 1, Subsection F, Part 75, shall be used in grading the shade or opacity of visible air contaminants emissions. The Director of Health may specify other means of measurement which give comparable results or results of greater accuracy. The two publication described in this Subsection are hereby made a part of this regulation by reference.

D. Limits on Visible Emissions Other Than Gray or Black. No person shall cause, suffer, allow or permit emissions from an existing or new installation a visible plume other than gray or black with an opacity equal to or greater than an equivalent opacity of No. 2 on the Ringelmann Smoke Chart, except uncombined Water Vapor and except that visible plumes emitted during rapping of precipitators, removal of collected dust and equipment changes may be equal to or greater than an equivalent opacity of No. 2 on the Ringelmann Smoke Chart for a period or periods aggregating not more than six (6) minutes in any sixty (60) consecutive minutes, nor more than six (6) hours in any 10-day period.

E. Particulate Matter.

1. Ambient Air Quality Standards for Particulate Matter. The concentrations of particulate matter in the atmosphere higher than the levels specified below for the various land use areas constitute undesirable levels, whether the sources are from natural causes or from the activities of man, and a state of air pollution exists when the concentrations of particulates exceed these levels. The ambient air quality for an area shall be determined on the basis of not less than (10) 24-hour samples taken within a 30-day period of time. The ambient air quality for an area is considered as failing to meet the standards stated below if the ambient atmosphere of the area, based on the requisite 24-hour sample, exceed these levels more than 10 percent (10%) of the time on a log-normal cumulative frequency distribution.

a. Concentration Levels.

(1) Rural: Not to exceed sixty (60) micrograms of particulate matter per cubic meter of air.

(2) Residential and Recreational: Not to be exceed eighty (80) micrograms of particulate matter per cubic meter of air.

(3) Commercial and Business: Not to exceed one hundred (100) micrograms of particulate matter per cubic meter of air.

(4) Industrial: Not to exceed one hundred twenty (120) micrograms of particulate matter per cubic meter of air.

b. Area Classification: Rural, residential, commercial and industrial area classifications are defined on the basis of their land use and are not to be considered as part of a local or statewide zoning system. The Director of Health shall decide the proper definition of an area.

c. Sampling and analysis to determine the concentration of particulate matter shall be performed in accordance with engineering guides prepared by the Health Department. The procedures will be consistent with obtaining accurate results which are representative of the conditions being evaluated and will be subject to revision as experience or knowledge dictate.

2. Emission Limits for Particulate Matter from Specific Activities.

a. Emission of Particulate Matter from Fuel-Burning Equipment.

(1) No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel to be discharged from any stack or chimney into the atmosphere, in excess of the hourly rate set forth in the following table:

Heat Input in Million British Thermal Units Per Hour	Maximum Allowable Emissions of Particulate Matter in Pounds per Million British Thermal Units
Up to and including 10	0.60
100	0.35
1,000	0.20
10,000 and above	0.12

(a) For a heat input between any two (2) consecutive heat inputs stated in the preceding table maximum allowable emissions of particulate matter are shown on Figure 1.

(b) For the purposes hereof, heat input shall be calculated as the aggregate heat content of all fuels (using the upper limit of their range of heating value) whose products of combustion pass through the stack or chimney.

(c) When two (2) or more fuel-buring units are connected to a single stack, the combined heat input of all units connected to the stack shall be used to determine the allowable emission from the stack.

(d) When a single fuel-burning unit is connected to two (2) or more stacks, the allowable emission from all the stacks conbined shall not exceed that allowable for the same unit connected to a single stack.

b. Emission of Particulate Matter from Industrial Processes.

1. General Provisions.

(a) This section applies to any operation, process or activity except the burning of fuel for direct heating in which the products of combustion do not come in direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning, and except existing foundry cupolas.

(b) Process weight per hour is the total weight of all materials introduced into any specific process which process may cause any discharge of particulate matter. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not. For a cyclical or batch operation, the process weight by the number of hours in one complete operation from the beginning of any process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation the process weight per hour will be derived by dividing the process weight for a typical period of time by said time period.

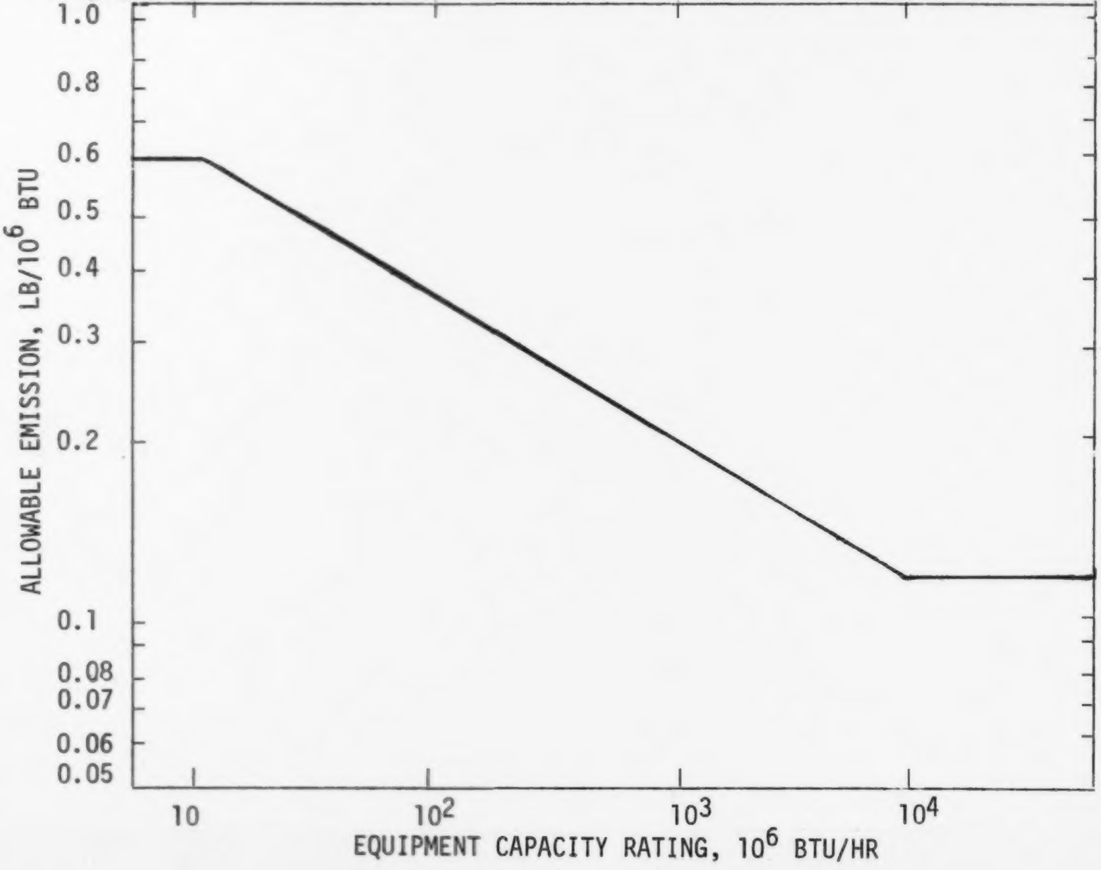
(c) The process weight per hour referred to in this section shall be based upon the normal operation maximum capacity of the equipment and if such normal maximum capacity should be increased by process of equipment changes, the new normal maximum capacity shall be used as the process weight in determining the allowable emissions.

(d) Emission tests relating to this regulation shall be made following the current standards in ASME 'Power Test Code PTC 27' entitled 'Determining Dust Concetration in a Gas Stream.'

2. Emission Limitations. Except as provided for in Section 2.(c), the emission of particulate matter in any one hour from any source shall be limited as follows:

(a) To the amount shown in Table 1 for the process weight allocated to such source.

Figure 1. Particulate Matter Emission Limits for Fuel-Burning Equipment



(b) No person shall cause, suffer, allow or permit the emission of particulate matter from any source in a concentration of excess of 0.30 grain per standard cubic foot of exhaust gases. If provisions of this Subsection (2)(b) would permit a greater emission of particulate matter per hour than allowed by Subsection (2)(a), the provision of Subsection (2)(b) shall not apply.

TABLE 1

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.00	25.2
800	0.40	2.22	40,000	20.00	30.2
1,000	0.50	2.58	50,000	25.00	35.4
1,500	0.75	3.38	60,000	30.00	40.0
2,000	1.00	4.10	70,000	35.00	41.3
2,500	1.25	4.76	80,000	40.00	42.5
3,000	1.50	5.38	90,000	45.00	43.6
3,500	1.75	5.96	100,000	50.00	44.6
4,000	2.00	6.52	120,000	60.00	46.3
5,000	2.50	7.58	140,000	70.00	47.8
6,000	3.00	8.56	160,000	80.00	49.0
7,000	3.50	9.49	200,000	100.00	51.2
8,000	4.00	10.4	1,000,000	500.00	69.0
9,000	4.50	11.2	2,000,000	1,000.00	77.6
10,000	5.00	12.0	6,000,000	3,000.00	92.7

Interpolation of the data in this table for process weight rates up to 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 4.10\ P^{0.67}$$

and interpolation and extrapolation of the data for process weight rate in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$, where E = rate of emission in lb/hr and

P = process weight rate in tons/hr

c. Emissions of Particulate Matter from Existing Foundry Cupolas.

(1) Every existing foundry cupola shall be equipped with air pollution control equipment which collect not less than 85 percent of the particulate matter which would be emitted without the use of such control equipment.

(2) No person shall cause, suffer, allow or permit the emission of particulate matter from any existing foundry cupola in a concentration in excess of 0.40 grains per standard dry cubic foot of exhaust gas. If provisions of this subsection would permit an emission of a greater weight of particulate matter per hour than is allowed by subsection (1) hereof, then the provisions of this subsection shall not apply.

F. Other Exceptions to Emission Limits.

1. Temporary emissions of particulate matter during periods of cleaning or adjusting process equipment shall not exceed 150 percent of the limits as set forth in the above sections for a period or periods aggregating not more than six (6) minutes in any sixty (60) consecutive minutes.

2. Upon the occurrence of an emergency, as defined in Subsection 5 of Section B, the emitter shall notify the Health Department as to the nature and estimated duration of the emergency. The Health Department may waive the requirements of this regulation for a period up to seventy-two (72) hours. If the estimated or actual duration is greater than seventy two (72) hours, the emitter shall apply for a Variance, according to Section 10 of Ordinance No. 10819.

SECTION 148. CONTROL OF AIR POLLUTION FROM SULFUR COMPOUNDS.

A. Purpose. It is the purpose of this regulation to establish air standards for the City and County of Tulsa, Oklahoma, on sulfur dioxide, sulfur trioxide, sulfuric acid, and hydrogen sulfide.

B. Definitions.

1. The same definitions as set forth in the enabling Clean Air Rules and Regulations under Title 63, Oklahoma Statutes, Sections 1-210 and 1-213 shall apply to this Section.

2. Sulfur Compounds. All inorganic or organic chemicals having an atom or atoms of sulfur in their chemical structure.

3. Emergency. Any departure from normal operations resulting in the temporary emission of 'sulfur compounds' above the specified standards.

C. Ambient Air Quality Standards for Sulfur Compounds.

1. The Air Pollution Control Section declares that concentrations of sulfur dioxide, sulfur trioxide, sulfuric acid, or hydrogen sulfide in the atmophere higher than the level specified, respectively, for each of the compounds in the table in paragraph 2 below, constitute undesirable levels, and that a state or air pollution exists when concentrations of any of the compounds exceed the level specified for that compound.

2. Table of Standards.

a. No person shall cause or permit the emission of sulfur dioxide from any premises in such manner and amounts that the concentrations and frequencies attributable to such emission exceed those shown in the following table in the ambient air at any occupied place beyond the premises on which the source is located:

Concentration[a]	Averaging Time	Maximum Allowable Frequency
0.15 PPM or More	1 Hour	Once in any 4 days
0.05 PPM or More	24 Hours	Once in any 90 days

[a] parts per Million by Volume

b. No person shall cause or permit the emission of sulfuric acid or sulfur trioxide or any combination thereof from any premises in such manner and amounts that the concentrations and frequencies attributable to such emission exceed those shown in the following table in the ambient air:

Concentration[a] of Sulfuric Acid or Sulfur Trioxide or any Combination Thereof	Averaging Time	Maximum Allowable Frequency
0.03 mg/m^3 or More	30 Minutes or more	Once in any 48 hours
0.01 mg/m^3 or More	24 Hours	Once in any 90 days

[a] Milligrams per cubic meter at standard conditions, measured and calculated as sulfuric acid.

c. No person shall cause or permit the emission of hydrogen sulfide from any premises in such manner and amounts that the concentrations and frequencies attributable to such emissions in the ambient air at any occupied place beyond the premises on which the source is located exceed the values shown in the following table:

Concentration[a] of Hydrogen Sulfide	Averaging Time	Maximum Allowable Frequency
0.03 PPM	30 minutes	Once in 5 days
0.05 PPM	30 minutes	Once per year

[a] part per Million by Volume

3. More Restrictive to Apply. In any situation in which more than one requirement of this regulation is applicable, the more restrictive provision shall be govern.

D. Emission Limitations.

1. Existing Installations. Other than mentioned in D.3 below, no person shall cause or permit the emission of gas containing sulfur dioxide in excess of 2,000 PPM, sulfur trioxide, or sulfuric acid or any combination thereof in excess of 70 mg/m^3, of hydrogen sulfide in excess of 100 PPM.

2. New Installations. Other than mentioned in D.3 below, no person shall cause or permit, from new installations, the emission of gas containing sulfur dioxide in excess of 500 PPM, sulfur trioxide or sulfuric acid or any combination thereof in excess of 50 mg/m^3, or hydrogen sulfide in excess of 100 PPM.

3. Existing Sulfuric Acid Plants.

a. No person shall cause or permit, from an existing sulfuric acid unit stack, the emission of gas containing sulfur dioxide in excess of that as calculated by the following equation:

Formula for SO_2 from a sulfuric acid unit--

$$S = 1/3 \, /-1690 + 20.75 \, N + P \, (68.5 - .2375 \, N)/$$

Where: $S = SO_2$ emission (PPM)
N = Nominal unit capacity (tons/day of H_2SO_4)
P = Unit production rate (tons/day of H_2SO_4)

b. No person shall cause or permit, from an existing sulfuric acid unit stack, the emission of sulfur trioxide of sulfuric acid of any combination thereof in excess of 70 mg/m^3.

E. Exceptions.

1. Temporary emissions of sulfur compounds during periods of startup and shutdown of continuous process operations, and during periods of inspections and periodic cleaning and maintenance of air control equipment, shall not exceed 200 percent of the limits specified in Section D.1, Emission Limitations, and shall not exceed 100 percent of the limits specified in Section D.2, for more than twenty-four (24) hour period.

2. Upon the occurrence of an emergency, as defined in Section B.3, the emitter shall notify the Health Department as to the nature and estimated duration of the emergency. The Health Department may waive the requirements of this regulation for a period up to seventy-two (72) hours. If the estimated or actual duration is greater than seventy-two (72) hours, the emitter shall apply for a variance according to Section 10 of Ordinance No. 10819.

F. Methods of Measurement.

1. Measurement of SO_2 in the Ambient Atmosphere.

a. Gaseous (SO_2) Colorimetric

Ref: SELECTED METHODS FOR THE MEASUREMENT OF AIR POLLUTANTS. Public Health Service Publication Number 999-AP-11 (May 1965), Determination of Sulfur Dioxide: West Gaeke Method, pp. 4-15.

b. Gaseous (SO_2) Conductometric

Ref: ASTM STANDARDS ON METHODS OF ATMOSPHERIC SAMPLING AND ANALYSIS. 2nd Edition, Method D. 1355-60, Method A. p. 11.

2. Measurement of SO_2 in Stack Gases

Gaseous (SO_2) (Shell Development Company Method).

Ref: ATMOSPHERIC EMISSIONS FROM SULFURIC ACID MANUFACTURING PROCESSES. Public Health Service Publication 999-AP-13 (1965), Appendix B, pp. 85-87.

3. Measurement of H_2SO_4 and SO_3 or any Combination Thereof in the Ambient Atmosphere.

H_2SO_4 Mist (Particulates).

Ref: B. T. Commons, "Determination of Particulate Acid in Town Air", ANALYST, 88, 364-367 May (1963)

4. Measurement of H_2SO_4 and SO_3 or any Combination Thereof in Stack Gases.

a. H_2SO_4 - Acid Mists (Particulates)

Ref: ATMOSPHERIC EMISSIONS FROM SULFURIC ACID MANUFACTURING PROCESSES. Public Health Service Publication 999-AP-13 (1965), Appendix B, pp. 61-66 (Modified Monsanto Company Method).

b. H_2SO_4 - SO_3 Gaseous

Ref: ATMOSPHERIC EMISSIONS FROM SULFURIC ACID MANUFACTURING PROCESSES. Public Health Service Publication 999-AP-13 (1965), Appendix B, pp. 90-92 (Shell Development Company Method).

5. Measurement of H_2S in the Ambient Atmosphere

Lead-acetate-impregnated Filter Paper Procedure

Ref: J. D. Sensbaugh and W. C. L. Hemeon, "A Low Cost Sampler for Measurement of Low Concentration of Hydrogen Sulfide," AIR REPAIR 4:5 (May 1954).

6. Sampling Procedures. All sampling of stack gases shall be made in accordance with ASME Bulletin "P.T.C. Number 27", entitled "Determining Dust Concentration in a Gas Stream."

7. Other Methods. Other test methods approved by the Tulsa City-County Health Department may be used. The publications describing methods of measurement specified in this section are hereby made a part of this regulation by reference.

SECTION 149. RIGHT OR REVIEW AND EXCEPTIONS THERETO.

There is hereby created a Review Board composed of five (5) members. One member shall be selected by the Technical Advisory Council from its membership. Two members shall be appointed by the City Commission and two members shall be appointed by the County Commission. The Review Board shall select annually a chairman from among its members. Meetings shall be called by the chairman. Three (3) members shall constitute a quorum.

A. When, in the opinion of the Director, a violation of this Ordinance exists, he may by conference, conciliation and persuasion, endeavor to the fullest extent possible to eliminate such violation. In case of the failure by conference, conciliation and persuasion to correct or remedy any claimed violation, the Director may cause to have issued and served personally or by registered mail upon the person complained against, a written order. The order shall specify the provisions of the Ordinance alleged to constitute a violation thereof and shall order the necessary corrective action to be taken within a reasonable time to be prescribed in such order. Any such order shall become final and enforceable unless the person or persons named therein request in writing a hearing before the Board of Review no later than (15) days after the date such order is served. The notice of hearing shall be delivered in person or by registered mail to the alleged violator or violators not less than ten (10) days before the time set for hearing.

Provided, however, the aforementioned right of review shall not apply to Section 145 (CONTROL OF OPEN BURNING) and Section 146 (INCINERATORS), and the Director may take such immediate action as he deems necessary to enforce the provisions of Section 145 (CONTROL OF OPEN BURNING) and Section 146 (INCINERATORS) hereof.

B. The respondent to the order may file a written answer thereto and may appear at such hearing in person or by representative, with or without counsel, and may make oral argument, offer testimony or cross-examine witnesses in support of the complaint, or taken any combination of such actions. In all proceedings before the Board of Review with respect to any alleged violation of the Ordinance, the burden of proof shall be upon the Director,

C. The Board of Review shall make such final determination as it shall deem appropriate under the circumstances and the Board of Review shall request the Director of Health to issue a final order in accordance with its findings. The Director shall notify the respondent thereof in writing by registered mail.

SECTION 150. VARIANCES.

Any person seeking a variance from the Clean Air Ordinance shall do so by filing a petition for variance with the Director of Health. The Director shall promptly investigate such petition and make a recommendation to the Board of Review as to the disposition thereof. Upon receiving the recommendation of the Director the Board of Review shall set a date for public hearing thereon and shall prescribe the length and type of notice to be given by the petitioner. Such hearing shall be held as provided above, except the burden of proof shall be on the petitioner. The Board of Review may grand individual variances beyond the limitations prescribed in this Ordinance.

SECTION 151. PENALTIES.

Any person who violates any provision of the Clean Air Ordinance, or any final order issued by the Director of Health pursuant to the provisions of this Ordinance and fails to permanently cease each violation of such order within (10) days after receipt of notice from the Department of Health specifying such violation, shall be deemed to be guilty of a misdemeanor and shall be fined not more than $100.00 or imprisoned for not more than (30) days, or both. Each day of violation shall be considered a separate offense.

SECTION 152. LIMITATIONS.

Nothing in this Ordinance shall be construed to:

A. Abridge, limit, impair, create, enlarge or otherwise effect substantially or procedurally the right of any person to damages or other relief on account of injury to persons or property and to maintain any action or other appropriate proceeding therefor.

B. Grant to the Board any jurisdiction or authority with respect to air contamination existing solely within commercial and industrial plants works or shops.

C. Affect the relations between employers and employees with respect to or arising out of air condition of air contamination or air pollution.

D. Supersede or limit the applicability of any law or ordinance relating to sanitation, industrial health or safety.